Site Condition Report - Herriard Biopower Ltd. Anaerobic digestion (AD) Plant

Herriard Bio Power Limited, Bushywarren Lane, Herriard, Basingstoke, RG25 2NS

Prepared by:

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ETL813/2023

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13 December 2023

QUALITY CONTROL

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Quality control sign off

Document Author	E Shann Pitts	*EV Shann Pitts*
Document Reviewer	A L Becvar	*AL Becvar*

Table of Contents

Abbreviations

AD	Anaerobic Digestion/er
BUP	Biogas upgrading plant
CHP	Combined heat and power
CO_2	Carbon dioxide
EA	Environment Agency
EPR	Environmental Permitting Regulations
HBP	Herriard Bio Power Limited
NVZ	Nitrate Vulnerable Zone
PHI	Priority Habitat Inventory
PVRV	Pressure and vacuum relief valve
SCR	Site Condition Report
TPA	Tonnes per annum
UV	Ultra violet

1. Introduction

This document, comprising a Site Condition Report (SCR), has been prepared by Earthcare Technical Ltd on behalf of the client Herriard Bio Power Limited in support of an application for a substantial variation of the existing bespoke waste operation permit to a bespoke installation permit for an anaerobic digestion (AD) plant, including the use of resultant biogas, at Herriard Bio Power Limited, Bushywarren Lane, Herriard, Basingstoke, RG25 2NS herein termed 'the Site'. The plant is operated by Herriard Bio Power Limited, herein termed 'the Operator'.

The original planning permission for the Herriard Bio Power AD plant was issued by Hampshire County Council on 9 October 2012 (Ref: BDB/76332) and permitted up to 16,700 tonnes per annum (tpa) of food waste and 12,500 tpa of crop material. On 23 March 2015 an amendment was approved to increase the maximum permitted annual tonnages of food waste to 40,000 tpa with the limit of 12,500 tpa still applying to crop feedstocks and associated vehicle movements (Ref: 14/03351/CMA). On 13 August 2018 permission was granted for Installation of Biogas Upgrader, Gas Storage Container, Biomethane Off Take Vehicle Bays and Ancillary Equipment (Ref: 18/01659/CMA). On 30 July 2021 planning permission was granted to implement tanks approved under 2012 permission for the original AD Plant along with similar works to those approved under the 2018 permission for the Installation of Biogas Upgrader, Gas Storage Container, Biomethane Off Take Vehicle Bays and Ancillary Equipment (including repositioning of two digester tanks approved under reference BDB/76332) and works, installation of a carbon dioxide recovery unit and subdivision and covering of existing lagoon for odour control and erection of office/welfare and classroom block (Ref: 21/00578/CMA).

Also proposed at this time was a new site drainage scheme, improved odour management system, extension of existing silage clamps and separation of the existing lagoon into two lagoons (16,000m^3 capacity each), and each covered alongside wider site improvements.

The bespoke waste operation permit for the site was issued on 20 January 2014 (EPR/AB3807KW) and now requires updating to reflect the current and proposed infrastructure.

The substantial permit variation which this Non-Technical Summary supports is to:

a) Reflect site upgrades, namely:

- The addition of a raw waste buffer tank (452m^3) with mixing and gas storage and 2 No. Primary Digesters (2,440m^3 each) for food waste all within an extended secondary containment area.
- The addition of a second combined heat and power engine (CHP). The existing CHP will become the 'standby' CHP and a new proposed CHP which will become the 'duty' CHP.
- The installation of an emergency generator.
- An upgrade to the Waste Reception Building including the installation of a new biofilter odour abatement system to replace the existing UV system.
- Installation of a new digestate pasteuriser (180m^3).
- Remodelling of the existing uncovered digestate storage lagoon into 2 No. new covered digestate storage lagoons.
- Addition of 2. No process water tanks (100m^3 each) within the secondary containment area for optimisation of use of dirty water on site.

- Addition of a lined surface water storage lagoon (3,000m^3).
- Addition of biogas upgrading plant (BUP) for the production of biomethane for transport off site via virtual gas pipeline and injection to the National Gas Grid and use of biomethane in an onsite vehicle refuelling facility.
- Addition of carbon dioxide (CO_2) capture from the gas upgrade plant, storage and transport.
- Replacement of the existing non-BAT compliant flare with a BAT compliant one and addition of a second flare to increase capacity to accommodate additional biogas generated from the site expansion.

b) Change the permit from a waste operation permit to an installation permit to reflect an increase in biological treatment capacity to over 100 tonnes per day.

c) Increase the maximum permitted quantity of treated waste from 36,500 to 40,000 tonnes per annum in line with the current planning permission.

d) Bring the permitted waste types in line with Appendix B of the Anaerobic Digestion Quality Protocol by removing six European Waste Catalogue (EWC) codes and adding one EWC code. Waste codes for wastes from wood processing and the production of panels and furniture (03 01 01 & 03 01 05) have not been requested although they are included in Appendix B of the ADQP as the process is not designed to treat these waste types.

e) Amend emission points to include the addition of:

- the outlet from the new biofilter odour abatement system.
- pressure and vacuum relief valves (PVRVs) on the new raw waste buffer tank, the 2 No. new digesters and the pasteuriser;
- a replacement to the existing flare;
- a second flare;
- the second combined heat and power engine (CHP) raising the aggregated net rated thermal input of onsite combustion plant to 5.7 MWth (excluding emergency generator). Calculations are carried out in accordance with the guidance[1] and are presented in Appendix A;
- the emergency generator (414kWe or 1.3 MWthi);
- a carbon dioxide vent on the biogas upgrading plant; and
- a single vent from an impregnated carbon filter which serves the channelled emissions from the 2 No. new covered lagoons.

f) Change the registered address of Herriard Bio Power Limited.

The activity is classified as an 'Installation' and therefore the requirements of the Industrial Emissions Directive apply, since the AD plant has a treatment capacity of more than 100 tonnes per day. The operation does not meet the location criteria for the equivalent Standard Rules permit for food waste (Standard Rules SR2021 No6[2]) as the site is within 50m of Ancient Woodland and Priority Habitat

[1] Determination of thermal input power of an engine driven generator, Association of Manufacturers of Power generating Systems (AMPS) Technical Committee, 2016
[2] SR2021 No 6: anaerobic digestion facility, including use of the resultant biogas – installations

Inventory (PHI) sites namely Great Bushy Warren Copse to the south and an area adjacent to the permitted boundary at the site access to the east; these sites are classified as both Ancient Woodland and PHI deciduous woodland. Therefore, a bespoke installation permit is required for the operation.

The Environmental Permitting Regulations Site Condition Report guidance for applicants H5,[3] defines a SCR as a document that describes and records the condition of the land and groundwater at a site at a particular point in time. When an operator applies to the Environment Agency (EA) to surrender the Environmental Permit, the SCR can be used to demonstrate that the land and groundwater have been protected during the lifetime of a regulated facility and that the land is in a satisfactory state.

There is no existing SCR for the site as one has not been deemed required to date. This report describes the site condition at the time of the permit application (November 2023). It is designed to be updated and retained through the rest of the operational phase of the regulated facility, for use as a reference at the end of the operational phase, when the operator makes an application to surrender all or part of the Environmental Permit.

The SCR comprises information gathered during a site walkover by Earthcare Technical Limited (16 August 2023) and a desk top study utilising:

- publicly available information from data searches; and an
- Enviro+Geo Insight Report, Groundsure (September 2023).

Please refer to the following SCR template which has been replicated from the guidance for the purposes of consistency.

[3] H5, Site condition report – guidance and templates, LIT Version 3.0 April 2013.

2. Site Details

Name of applicant	Herriard Bio Power Limited
Activity address	Bushywarren Lane, Herriard, Basingstoke, RG25 2NS
National grid reference	SU 65490 46638
Site footprint[4]	The permitted area is approximately 7.7 hectares (19.0 acres) in extent.
Current infrastructure	• Access road • Weighbridge • 2 No. silage clamps (7,500m^3 capacity each) • 1 No. external solids feeder (Crop / 40 tonnes capacity) • Mixing pumps • Waste Reception Building comprising: – Mavitec depackaging line – paddle de-pack with hopper (4m^3 capacity) with screen (12mm) – UV odour abatement system – Roller shutter doors – Quarantine bay – Sealed drainage sump – 2.5m high concrete walls inside building structure • 1 No. primary digester (2,440m^3 each) • 1 No. post digester (2,440m^3) • A pasteuriser with three tanks • Secondary containment for tanks • 1 No. screw press separator, buffer tank (100m^3) and associated fibre storage bay • 1. No uncovered digestate storage lagoon • Gas compressors • 1 No. carbon filter prior to combined heat and power engine (CHP) • 1 No. CHP (1,200kWe) • 1 No. Emergency flare (500Nm^3/hour) • Emergency diesel generator (414kWe) • Heat exchangers • Control room / site office • 40m^3 process water tank
Proposed additional infrastructure	• Upgrades to the Waste Reception Building to incorporate: – fast acting roller shutter doors (maximum opening speed of 0.5m/s and a closing speed of 0.3m/s) – new biofilter odour abatement plant

	– improved internal surfacing and drainage. – system to ensure washed packaging material is stored inside the building. – Liquid waste delivery point • 2 No. Primary digesters (2,440m^3 each) with mixing, heating, and gas storage. • 2 No. carbon filters in series serving biogas upgrading plant. • Biogas upgrading plant including vent to atmosphere. • Biomethane compressors • 2 No. Biomethane trailer bays • Biomethane vehicle fuel dispensing pump • Carbon dioxide recovery unit • Carbon dioxide compressor • Carbon dioxide storage • Lined surface water storage lagoon (3,000m^3) • 1 No. additional Emergency flare (1,000Nm^3/hour)
Changes to the existing infrastructure due to ongoing site upgrade works	• Silage clamps resurfaced and drainage improved. • Replacement of liquid waste tanks adjacent to Waste Reception Building with a Raw waste buffer tank (452m^3) with mixing and gas storage • Secondary containment area extended to include Raw Waste Buffer Tank and the two new primary digester tanks. • 1 No. single tank pasteuriser (180m^3) to replace 3 No. tank system. • Replacement of single screw press separator with 2. No FAN Screw Press separators. • Upgrade the fibre storage bay (4.5m x 5.3m x 1.85m high), surfacing and drainage. • Installation of tented structure over separators and around 3 sides of fibre storage bay. • Digestate lagoon remodelled into two covered lagoons (16,500m^3 each) with gas treatment. • Existing flare upgraded from C-Deg to BAT compliant Uniflare 500Nm^3/hour. • Replacement of single 40m^3 process water tank with 2 No. 100m^3 process water tanks within secondary containment system.
Document reference and dates for Site Condition Report at permit application	There are no records of previous Site Condition Reports the land was an arable field growing a cereal rotation prior to development. The new permit application for a waste operation in 2013 would not have required a SCR.

Document References for site plans (including location and boundaries)	Figure 1: Site Location Plan, Earthcare Technical Limited (ETL813/EPR01/V1.0) Figure 2: Permit Boundary & Emission Point Plan, Earthcare Technical Limited (ETL813/EPR02/V1.0) Figure 3: Site Layout Plan (to be added once site survey complete) Figure 4: Site Drainage Plan (to be added once site survey complete) Figure 5: Human Receptor Plan, Earthcare Technical Limited (ETL813/EPR03/V1.0) (See Figures)

3. Condition of the Land at Permit Issue

Environmental setting including: • Geology • Hydrogeology • Surface waters	**Geology** As detailed in Section 14 of the Enviro+Geo Insight Report (Appendix A): • The bedrock geology is chalk namely, Seaford Chalk Formation; • The superficial geology is Clay-with-flints Formation - Diamicton. **Hydrogeology** As detailed in Section 5 of the Enviro+Geo Insight Report (Appendix A): • The superficial aquifer is unproductive. • The bedrock aquifer (chalk) is a Principal aquifer. • Groundwater vulnerability is classified as medium risk due to soluble rock risk. • The site is not within a groundwater Source Protection Zone. • In 2019 the groundwater body catchment Basingstoke Chalk was classified by the Environment Agency as having an overall water body classification of 'poor' comprising of 'poor' for quantitative status and 'poor' for chemical status. • The site is within two Nitrate Vulnerable Zone (NVZ) for groundwater namely, Hampshire Chalk NVZ (143) and Kingsclere and Greywell NVZ (145). • There are no licensed groundwater abstractions within 2,000m. The site is not within a Drinking Water Protected Area or Safeguard Zone.[5]

[5] https://magic.defra.gov.uk/MagicMap.aspx Accessed 21 November 2023

	Surface Water As detailed in Section 6 of the Enviro+Geo Insight Report (Appendix A): • There are no licensed surface water abstractions within 2,000m. • The site is within the Water Framework Directive (WFD) of the Candover Brook which was classified as having a moderate ecological rating of moderate and a chemical rating of fail in 2019. • The nearest WFD surface water body is the Candover Brook 10,946m south west of the site. There are no watercourses within the vicinity of the site. • The site is within the Hamble Estuary Eutrophic Nitrate Vulnerable Zones (NVZ) (TraC) for Eutrophic Water (ET3). The site is not within a Drinking Water (Surface Water) Protected Area or Drinking Water (Surface Water) Safeguard Zone. [5] **Flood Risk** As detailed in Section 8 of the Enviro+Geo Insight report: • The site is situated in a location which has a low probability of flooding (Flood Zone 1). • There is a negligible risk of surface water flooding on site.
Pollution history including: • Pollution incidents that may have affected land • Historical land uses and associated contaminants • Any visual/ olfactory evidence of existing contamination • Evidence of damage to pollution prevention measures	**Pollution incidents that may have affected land** As detailed in Section 4.18 of the Enviro+Geo Insight Report (Appendix A) there are no records of substantiated pollution incidents within 500m of the site. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents. **Permitted activities that may have affected land** As detailed in Section 4 of the Enviro+Geo Insight Report (Appendix A) there are no current industrial land uses that may have affected the land on site, except those of the existing site operations. Whilst this operation is not deemed to have affected the land in question, it is of note that the site is west of and adjacent to the Little Bushy Warren Composting Facility operated by Veolia ES Hampshire Limited under an Installation permit (environmental permit reference EPR/JP3795HX). There are two permitted discharges to ground associated with the composting operation: • Site Drainage to ground following treatment in reedbeds to the north west of the AD site (Permit ref: EPR/CP3821GT) • Final treated sewage effluent to ground via a soakaway over 100m from AD site boundary (Permit ref: G00849)

	As detailed in Section 4.9 of the Enviro+Geo Insight Report (Appendix A) there are no historical licensed industrial activities (IPC) within 500m of the site that may have affected the land on site. In accordance with Section 3.7 of the Enviro+Geo Insight Report (Appendix A) there are two waste exemption that have been registered for the site for Use of Waste in Construction (U1 waste exemption). The U1 exemption allows use of suitable waste in construction as a recovery activity for inert waste material only and there should not have been any land contamination as a result of this activity. **Historical / current land uses** There is an 'unspecified pit' on the northern boundary (shown on plan on page 15 of the Enviro+Geo Insight Report). This pit was first recorded in 1872. There are no further details available. **Potential contaminants associated with previous site uses** The aerial photography at the beginning of the Enviro+Geo Insight Report show that before the AD plant was built in 2013, the site was agricultural land. There may be minor land contamination resulting from minor spillages from the existing AD operation since 2013. Potential contaminants are: • Waste materials, crop feedstocks and digestate (fully biodegradable). • Fuels and oils from vehicles, mobile plant, maintenance and CHP operations. There are no records of spillages which may have affected land on site. **Any visual / olfactory evidence of existing contamination** At the time of the site walkover carried out by Earthcare Technical Limited (16 August 2023), remedial clean-up of digestate and silage was being undertaken within site operational areas but there was no visual evidence of other signs of contamination. **Evidence of damage to pollution prevention measures** At the time of the site walkover carried out by Earthcare Technical Limited (16 August 2023), there was evidence of some minor damage to pollution prevention measures, namely: • The surfacing in front of the silage clamps was pitted with dirty water collecting in pools. This is being rectified. • There was an area of unmade ground in front of the separators. This has been rectified. • The leak detection pots on the existing digesters (D1 and the Post Digester) were full of water so could not be inspected. This has been rectified.

	• The extension to the secondary containment system around the new infrastructure was incomplete. This has been completed.
Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports	There is no current evidence of historical contamination.
Baseline soil and groundwater reference data	There are no baseline and groundwater reference data available.
Supporting information	• Enviro+Geo Insight Report (Appendix A) • Site Photographs (Appendix B)

4. Permitted Activities

Permitted activities	Schedule 1 5.4 A(1)(b)(i) - Biological Treatment (Anaerobic digestion / more than 100 tonnes per day treatment capacity) of the Environmental Permitting Regulations 2016 (as amended).
Non – permitted activities	The Directly Associated Activities include: • Storage of waste pending recovery • Raw material storage • Physical treatment including preparation of solid feedstocks • Chemical addition –addition of process chemicals as required to control hydrogen sulphide in biogas. • Storage of digestate • Treatment of digestate • Gas storage, drying and treatment • Burning of biogas in CHP engine(s) • Gas upgrading to biomethane • Carbon dioxide capture (proposed but not being carried out at time of writing) • Use of emergency flares required only for short periods of breakdown or maintenance of the facility • Use of PVRVs to protect the integrity of the plant (emergency use only) • Surface water collection and storage • Dirty water collection and storage • Air treatment
Document references for : • Plan showing activity layout; and • Environmental risk assessment	• Site Layout, Plandescil (To be added once site survey complete) • Environmental Risk Assessment (Appendix A of Environmental Management System Manual (**HBP-OD-01** EMS Manual) • Air Quality Impact Assessment (ETL813/AQOIA/V1.0/Final December 2023)

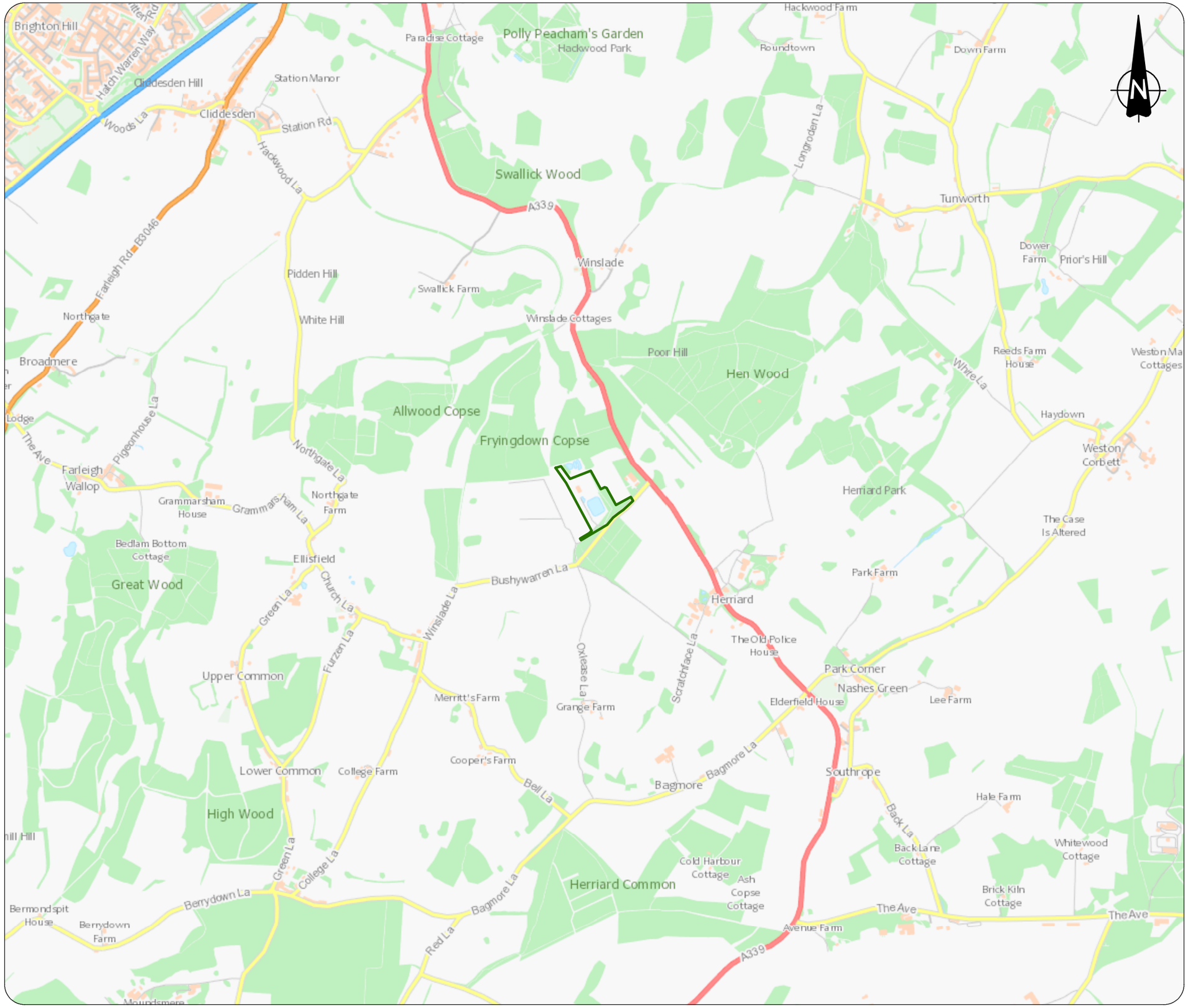
4.0 CHANGES TO THE ACTIVITY	
Have there been any changes to the activity boundary?	There have been no changes to the activity boundary since the permit was issued in January 2014.
Have there been any changes to the permitted activities?	There have been no changes to the permitted activities since permit issue in January 2014.
Have any 'dangerous substances' not identified in the Application Site Condition Report been used or produced as a result of the permitted activities?	There was no SCR submitted for the original permit application as it was for a waste operation permit for which no SCR was required at the time. Biogas is classified as a dangerous substance under Control of Major Accident Hazards (COMAH) regulations. Biogas is produced, stored, and used on site as described in the process description of the Environmental Management System Manual **(HBP-OD-01)**. Other substances stored on site which are potentially dangerous are: • Diesel used for mobile plant and in the back-up generator – stored within bunded tanks. • Fresh oil used in the CHP engines – 2 No. 1,200 litre bunded tanks housed within CHP containers. • Waste oil from CHP engines – 2 No, 1,200 litre housed within bunded tanks in CHP containers. • Glycol used to stop water in PVRVs freezing – stored on bunding drip trays in workshop area. • Ferric hydroxide powder for reduction of hydrogen sulphide production in biogas – stored in Waste Reception Building.
Checklist of supporting information	Not applicable.

5.0 MEASURES TAKEN TO PROTECT LAND	
Since site commissioning the drainage system has been configured such that all site surface water is collected as 'dirty' and used in the AD process. The drainage system including clean and dirty water separation are being improved as part of the current site improvement work. There has been secondary containment in place for Digester 1 and the Post Digester since the plant was built in 2013. The secondary containment is being extended and improved to include the 2 No. new digesters and the raw waste buffer tank. At the time of writing this containment system is due to be reviewed and improved as required to meet CIRIA C736 by a suitably qualified Chartered Engineer. It is likely that little or no deterioration of site soil has occurred since the permit was issued, as no on-site pollution incidents have been recorded, and land is therefore likely to be in a satisfactory condition. The risk of the site being contaminated as a result of permitted activities is therefore considered to be low. However, no intrusive sampling has been undertaken. This has been justified on the basis of the standard of engineering for pollution prevention purposes and the review of the available information.	
Checklist of supporting information	Site photos from walkover (Appendix B).

6.0 POLLUTION INCIDENTS THAT MAY HAVE HAD AN IMPACT ON LAND, AND THEIR REMEDIATION	
No pollution incidents have been reported which may have affected the ground condition. As such, no intrusive investigation or remediation clean-up is known to have been carried out.	
Checklist of supporting information	Groundsure Enviro+Geo Insight Report (Appendix A)

7.0 SOIL GAS AND WATER QUALITY MONITORING (WHERE UNDERTAKEN)	
There is no baseline soil and groundwater data available.	
Checklist of supporting information	Not applicable.

Figures



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REVISIONS

REV	DATE	DESCRIPTION	DWN	CHK	APP
-	12/12 2023	First Issue	JJ	EP	MF

LEGEND

Permit Boundary

0 250 500 750 1,000 m

Scale at A3: 1:25,000

Client: Herriard Bio Power Limited

Project: Substantial Permit Variation

Title: Site Location Plan

Earthcare TECHNICAL
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JJ	EP	MF	
Date		**Scale**	**Sheet Size**
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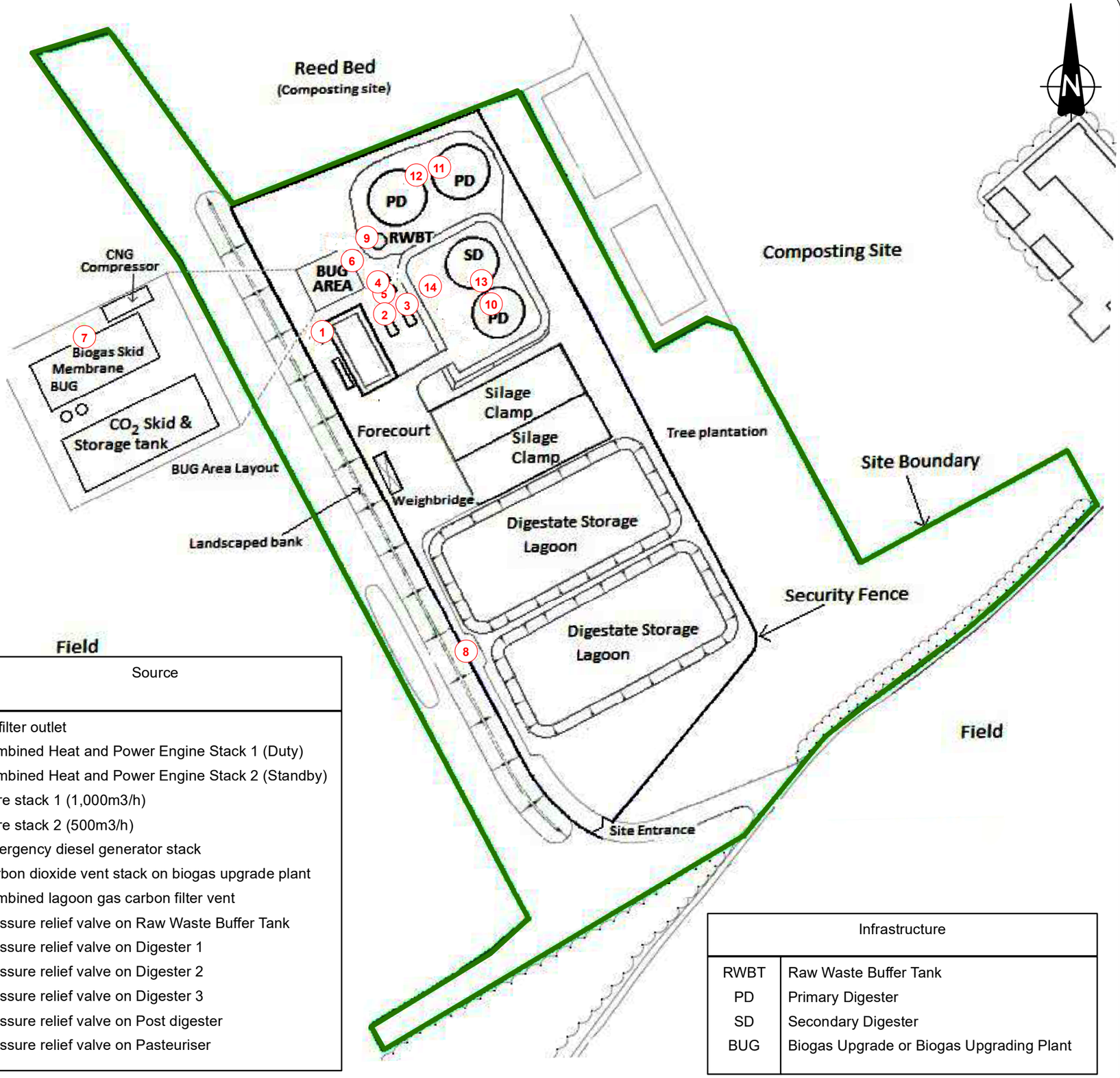
ETL813/HBP/EPR01			ETL813.mxd



Emission Point Reference	Source
EP1	Biofilter outlet
EP2	Combined Heat and Power Engine Stack 1 (Duty)
EP3	Combined Heat and Power Engine Stack 2 (Standby)
EP4	Flare stack 1 (1,000m3/h)
EP5	Flare stack 2 (500m3/h)
EP6	Emergency diesel generator stack
EP7	Carbon dioxide vent stack on biogas upgrade plant
EP8	Combined lagoon gas carbon filter vent
EP9	Pressure relief valve on Raw Waste Buffer Tank
EP10	Pressure relief valve on Digester 1
EP11	Pressure relief valve on Digester 2
EP12	Pressure relief valve on Digester 3
EP13	Pressure relief valve on Post digester
EP14	Pressure relief valve on Pasteuriser

Infrastructure	
RWBT	Raw Waste Buffer Tank
PD	Primary Digester
SD	Secondary Digester
BUG	Biogas Upgrade or Biogas Upgrading Plant

REVISIONS

REV	DATE	DESCRIPTION	DWN	CHK	APP
-	12/12 2023	First Issue	JJ	EP	MF

LEGEND

Permit Boundary

1 EP1

0 25 50 75 m

Scale at A3: 1:2,000

Client
Herriard Bio Power Limited

Project
Substantial Permit Variation

Title
Permit Boundary & Emission Point Plan

Earthcare TECHNICAL
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JJ	EP	MF	

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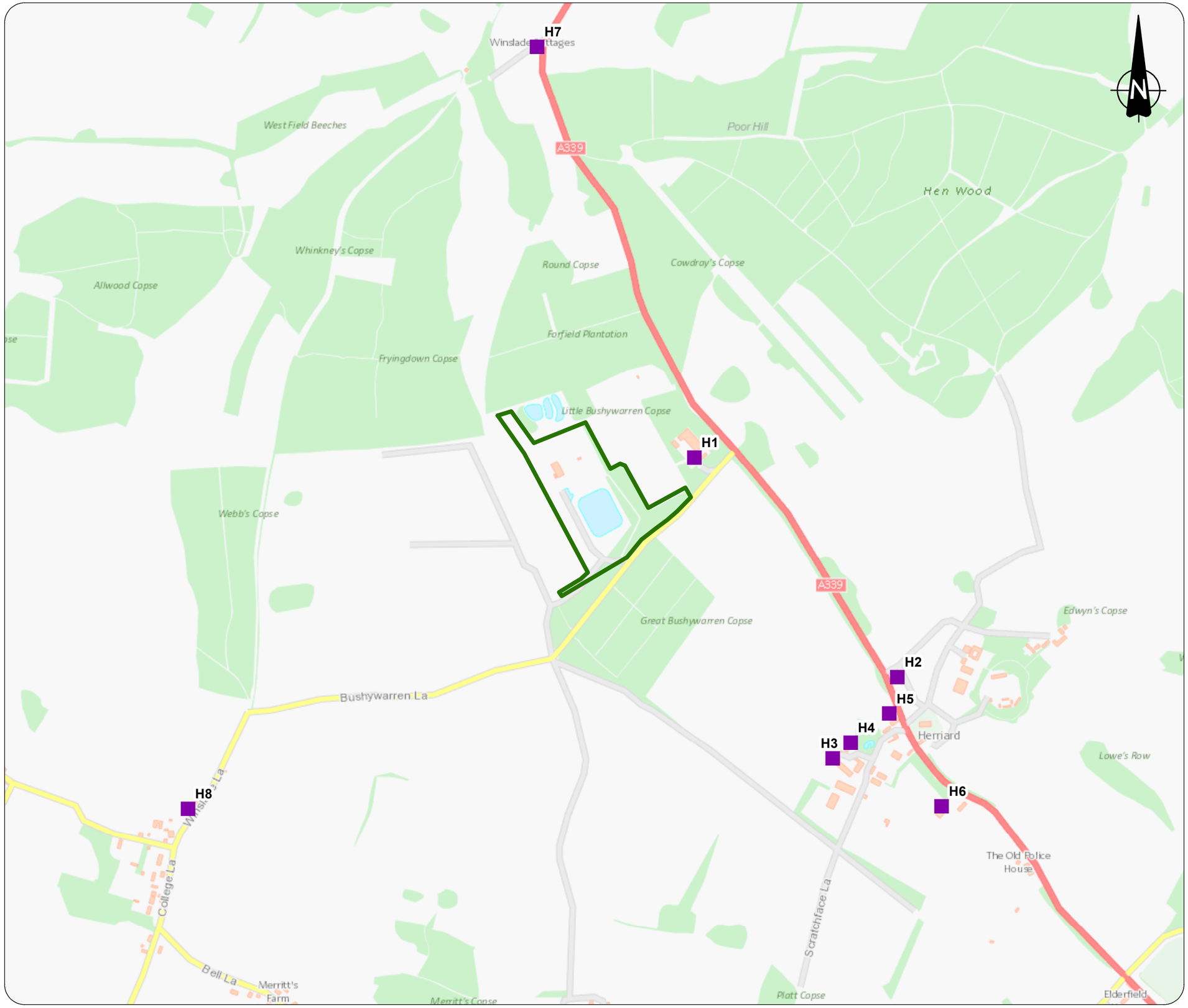

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REV	DATE	DESCRIPTION	DWN	CHK	APP
-	12/12 2023	First Issue	JJ	EP	MF

LEGEND

- Permit Boundary
- Human Receptor

0 100 200 300 400 m

Scale at A3: 1:10,000

Client
Herriard Bio Power Limited

Project
Substantial Permit Variation

Title
Human Receptors Plan

Earthcare TECHNICAL
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Date	Scale	Sheet Size
December 2023	1:10,000	A3

Drawing Number	File Reference
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Appendix A: Enviro+Geo Insight Report

Groundsure
LOCATION INTELLIGENCE

Enviro+Geo Insight

HERRIARD BIO POWER LTD, SITE OFFICE, BUSHYWARREN LANE, ELLISFIELD, RG25 2NS

Order Details

Date: 19/09/2023

Your ref: Herriard_Biopower_AD_Plant

Our Ref: GS-7RZ-5CU-15N-7H3

Site Details

Location: 465434 146659

Area: 8.53 ha

Authority: Basingstoke and Deane Borough Council ↗

Contact us with any questions at:
info@groundsure.com ↗
01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	3	0	4	6	-
16	1.2	Historical tanks	0	0	0	0	-
16	1.3	Historical energy features	0	0	0	0	-
17	1.4	Historical petrol stations	0	0	0	0	-
17	1.5	Historical garages	0	0	0	0	-
17	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
18 >	2.1 >	Historical industrial land uses >	6	0	5	10	-
19	2.2	Historical tanks	0	0	0	0	-
20	2.3	Historical energy features	0	0	0	0	-
20	2.4	Historical petrol stations	0	0	0	0	-
20	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
21	3.1	Active or recent landfill	0	0	0	0	-
21	3.2	Historical landfill (BGS records)	0	0	0	0	-
22	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
22	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
22 >	3.5 >	Historical waste sites >	0	0	2	0	-
23 >	3.6 >	Licensed waste sites >	2	0	9	0	-
26 >	3.7 >	Waste exemptions >	2	0	0	0	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
27 >	4.1 >	Recent industrial land uses >	1	1	1	-	-
28	4.2	Current or recent petrol stations	0	0	0	0	-
28	4.3	Electricity cables	0	0	0	0	-
28	4.4	Gas pipelines	0	0	0	0	-
29	4.5	Sites determined as Contaminated Land	0	0	0	0	-

29	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
29	4.7	Regulated explosive sites	0	0	0	0	-
29	4.8	Hazardous substance storage/usage	0	0	0	0	-
29	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
30 >	**4.10 >**	**Licensed industrial activities (Part A(1)) >**	0	0	2	0	-
30	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
30	4.12	Radioactive Substance Authorisations	0	0	0	0	-
31 >	**4.13 >**	**Licensed Discharges to controlled waters >**	0	1	3	0	-
31	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
32	4.15	Pollutant release to public sewer	0	0	0	0	-
32	4.16	List 1 Dangerous Substances	0	0	0	0	-
32	4.17	List 2 Dangerous Substances	0	0	0	0	-
32	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
32	4.19	Pollution inventory substances	0	0	0	0	-
33 >	**4.20 >**	**Pollution inventory waste transfers >**	0	0	1	0	-
34	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	**Hydrogeology >**	On site	0-50m	50-250m	250-500m	500-2000m
35 >	**5.1 >**	**Superficial aquifer >**	Identified (within 500m)				
36 >	**5.2 >**	**Bedrock aquifer >**	Identified (within 500m)				
38 >	**5.3 >**	**Groundwater vulnerability >**	Identified (within 50m)				
39 >	**5.4 >**	**Groundwater vulnerability- soluble rock risk >**	Identified (within 0m)				
39	5.5	Groundwater vulnerability- local information	None (within 0m)				
40	5.6	Groundwater abstractions	0	0	0	0	0
40	5.7	Surface water abstractions	0	0	0	0	0
40	5.8	Potable abstractions	0	0	0	0	0
40	5.9	Source Protection Zones	0	0	0	0	-
41	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	**Hydrology >**	On site	0-50m	50-250m	250-500m	500-2000m
42	6.1	Water Network (OS MasterMap)	0	0	0	-	-

42 >	6.2 >	Surface water features >	1	3	0	-	-
43 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
43 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
44 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-

Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
45	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
45	7.2	Historical Flood Events	0	0	0	-	-
45	7.3	Flood Defences	0	0	0	-	-
46	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
46	7.5	Flood Storage Areas	0	0	0	-	-
47	7.6	Flood Zone 2	None (within 50m)				
47	7.7	Flood Zone 3	None (within 50m)				

Page	Section	Surface water flooding >	
48 >	8.1 >	Surface water flooding >	1 in 1000 year, 0.3m - 1.0m (within 50m)

Page	Section	Groundwater flooding >	
50 >	9.1 >	Groundwater flooding >	Low (within 50m)

Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
51	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
52	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
52	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
52	10.4	Special Protection Areas (SPA)	0	0	0	0	0
52	10.5	National Nature Reserves (NNR)	0	0	0	0	0
53	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
53 >	10.7 >	Designated Ancient Woodland >	1	1	1	2	27
54	10.8	Biosphere Reserves	0	0	0	0	0
55	10.9	Forest Parks	0	0	0	0	0
55	10.10	Marine Conservation Zones	0	0	0	0	0
55	10.11	Green Belt	0	0	0	0	0
55	10.12	Proposed Ramsar sites	0	0	0	0	0

55	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
56	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
56	10.15	Nitrate Sensitive Areas	0	0	0	0	0
56 >	**10.16 >**	**Nitrate Vulnerable Zones >**	3	1	0	3	7
58 >	**10.17 >**	**SSSI Impact Risk Zones >**	2	-	-	-	-
59	10.18	SSSI Units	0	0	0	0	0
Page	Section	**Visual and cultural designations >**	On site	0-50m	50-250m	250-500m	500-2000m
60	11.1	World Heritage Sites	0	0	0	-	-
61	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
61	11.3	National Parks	0	0	0	-	-
61	11.4	Listed Buildings	0	0	0	-	-
61	11.5	Conservation Areas	0	0	0	-	-
62	11.6	Scheduled Ancient Monuments	0	0	0	-	-
62 >	**11.7 >**	**Registered Parks and Gardens >**	0	0	1	-	-
Page	Section	**Agricultural designations >**	On site	0-50m	50-250m	250-500m	500-2000m
63 >	**12.1 >**	**Agricultural Land Classification >**	Grade 3 (within 250m)				
64	12.2	Open Access Land	0	0	0	-	-
64 >	**12.3 >**	**Tree Felling Licences >**	0	2	1	-	-
64	12.4	Environmental Stewardship Schemes	0	0	0	-	-
64 >	**12.5 >**	**Countryside Stewardship Schemes >**	1	2	5	-	-
Page	Section	**Habitat designations >**	On site	0-50m	50-250m	250-500m	500-2000m
66 >	**13.1 >**	**Priority Habitat Inventory >**	0	4	15	-	-
67	13.2	Habitat Networks	0	0	0	-	-
67	13.3	Open Mosaic Habitat	0	0	0	-	-
68	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	**Geology 1:10,000 scale >**	On site	0-50m	50-250m	250-500m	500-2000m
69 >	**14.1 >**	**10k Availability >**	Identified (within 500m)				
70 >	**14.2 >**	**Artificial and made ground (10k) >**	0	1	0	4	-
72 >	**14.3 >**	**Superficial geology (10k) >**	1	0	1	3	-

73	14.4	Landslip (10k)	0	0	0	0	-
74 >	14.5 >	Bedrock geology (10k) >	1	0	0	1	-
75	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
76 >	15.1 >	50k Availability >	Identified (within 500m)				
77	15.2	Artificial and made ground (50k)	0	0	0	0	-
77	15.3	Artificial ground permeability (50k)	0	0	-	-	-
78 >	15.4 >	Superficial geology (50k) >	1	0	0	0	-
79 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
79	15.6	Landslip (50k)	0	0	0	0	-
79	15.7	Landslip permeability (50k)	None (within 50m)				
80 >	15.8 >	Bedrock geology (50k) >	1	0	0	0	-
81 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
81	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
82 >	16.1 >	BGS Boreholes >	0	0	1	-	-
Page	Section	Natural ground subsidence >					
83 >	17.1 >	Shrink swell clays >	Low (within 50m)				
84 >	17.2 >	Running sands >	Negligible (within 50m)				
85 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
86 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
87 >	17.5 >	Landslides >	Very low (within 50m)				
88 >	17.6 >	Ground dissolution of soluble rocks >	High (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
90	18.1	BritPits	0	0	0	0	-
91 >	18.2 >	Surface ground workings >	6	0	6	-	-
91	18.3	Underground workings	0	0	0	0	0
92	18.4	Underground mining extents	0	0	0	0	-
92	18.5	Historical Mineral Planning Areas	0	0	0	0	-

92 >	18.6 >	Non-coal mining >	1	0	1	1	1
93	18.7	JPB mining areas	None (within 0m)				
93	18.8	The Coal Authority non-coal mining	0	0	0	0	-
93	18.9	Researched mining	0	0	0	0	-
94	18.10	Mining record office plans	0	0	0	0	-
94	18.11	BGS mine plans	0	0	0	0	-
94	18.12	Coal mining	None (within 0m)				
94	18.13	Brine areas	None (within 0m)				
94	18.14	Gypsum areas	None (within 0m)				
95	18.15	Tin mining	None (within 0m)				
95	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes >	On site	0-50m	50-250m	250-500m	500-2000m
96	19.1	Natural cavities	0	0	0	0	-
97 >	19.2 >	Mining cavities >	0	0	0	0	1
97	19.3	Reported recent incidents	0	0	0	0	-
97	19.4	Historical incidents	0	0	0	0	-
98	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
99 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
101 >	21.1 >	BGS Estimated Background Soil Chemistry >	4	0	-	-	-
101	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
101	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects >	On site	0-50m	50-250m	250-500m	500-2000m
102	22.1	Underground railways (London)	0	0	0	-	-
102	22.2	Underground railways (Non-London)	0	0	0	-	-
103	22.3	Railway tunnels	0	0	0	-	-
103	22.4	Historical railway and tunnel features	0	0	0	-	-
103	22.5	Royal Mail tunnels	0	0	0	-	-

103 >	22.6 >	Historical railways >	0	1	0	-	-
104	22.7	Railways	0	0	0	-	-
104	22.8	Crossrail 1	0	0	0	0	-
104	22.9	Crossrail 2	0	0	0	0	-
104	22.10	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 04/04/2021

Site Area: 8.53ha

Recent site history - 2018 aerial photograph

Capture Date: 06/05/2018

Site Area: 8.53ha

Recent site history - 2013 aerial photograph

Capture Date: 02/06/2013

Site Area: 8.53ha

Recent site history - 2005 aerial photograph

Capture Date: 19/06/2005

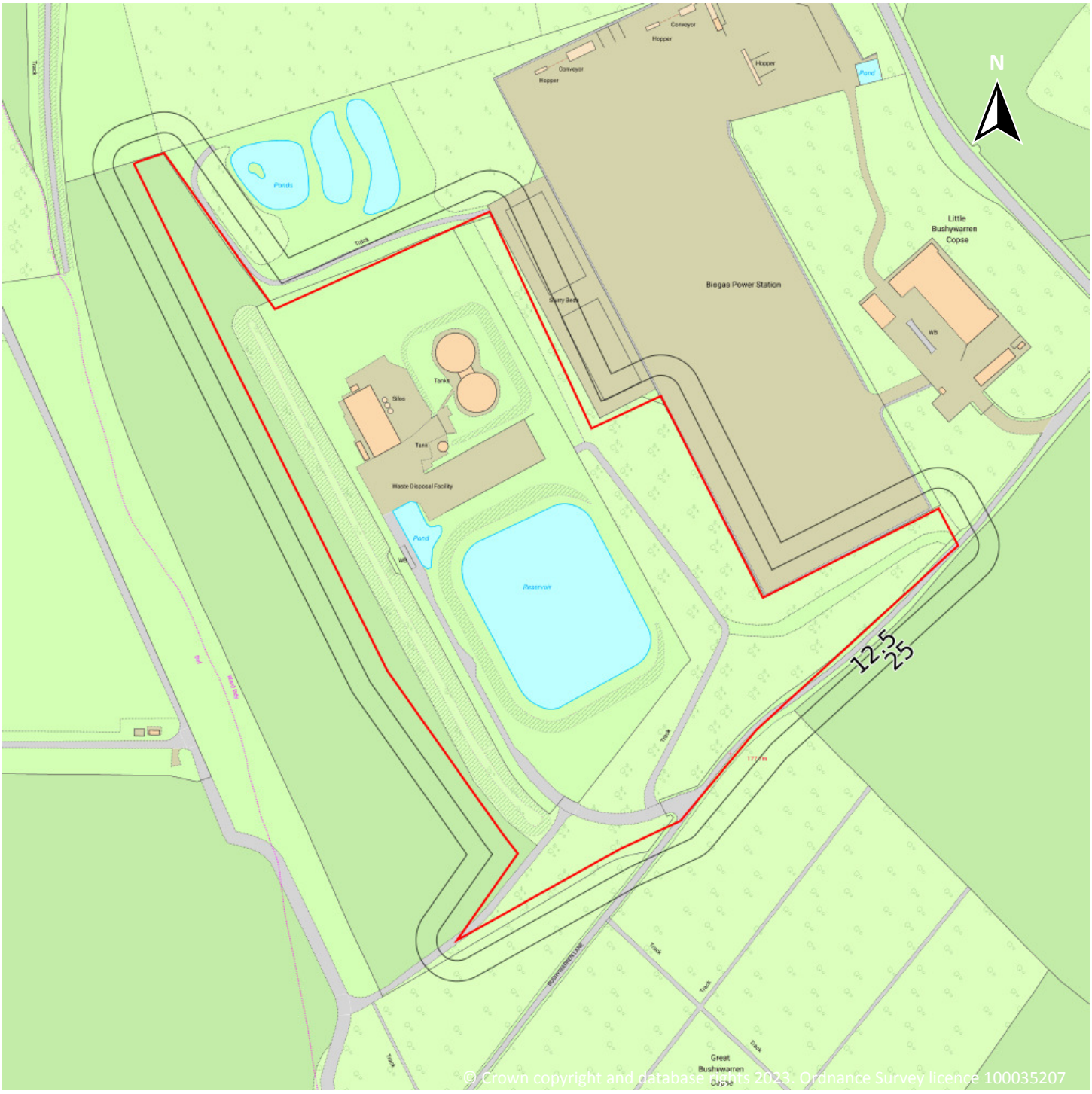
Site Area: 8.53ha

Recent site history - 1999 aerial photograph

Capture Date: 04/09/1999

Site Area: 8.53ha

OS MasterMap site plan



Site Area: 8.53ha

1 Past land use

Site Outline

Search buffers in metres (m)

Historical industrial land uses

1.1 Historical industrial land uses

Records within 500m	13

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 15 >**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Unspecified Pit**	**1911**	**1900166**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Unspecified Pit**	**1909 - 1956**	**1905727**
A	**On site**	**Unspecified Pit**	**1872**	**1963987**
B	104m NW	Cuttings	1982	1888020
B	109m NW	Cuttings	1911 - 1956	1946336
B	109m NW	Cuttings	1909	1968872
B	110m NW	Cuttings	1911	1950239
1	339m N	Unspecified Heap	1872	1870019
C	475m N	Unspecified Pit	1872	1878847
C	478m N	Old Chalk Pits	1894 - 1911	1952936
C	481m N	Old Chalk Pits	1956	1959255
C	481m N	Unspecified Disused Pit	1982	1855237
C	487m N	Old Chalk Pits	1894	1954858

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	0

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	0

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m	0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.

2 Past land use - un-grouped

Site Outline

Search buffers in metres (m)

Historical industrial land uses

2.1 Historical industrial land uses

Records within 500m	21

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 18 >**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Unspecified Pit**	**1911**	**1905727**
A	**On site**	**Unspecified Pit**	**1872**	**1963987**
A	**On site**	**Unspecified Pit**	**1909**	**1905727**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Unspecified Pit**	**1956**	**1905727**
A	**On site**	**Unspecified Pit**	**1911**	**1900166**
A	**On site**	**Unspecified Pit**	**1911**	**1900166**
B	104m NW	Cuttings	1982	1888020
B	109m NW	Cuttings	1911	1946336
B	109m NW	Cuttings	1909	1968872
B	110m NW	Cuttings	1911	1950239
B	118m NW	Cuttings	1956	1946336
1	339m N	Unspecified Heap	1872	1870019
C	475m N	Unspecified Pit	1872	1878847
C	478m N	Old Chalk Pits	1911	1952936
C	480m N	Old Chalk Pits	1911	1952936
C	480m N	Old Chalk Pits	1909	1952936
C	480m N	Old Chalk Pits	1894	1952936
C	480m N	Old Chalk Pits	1894	1952936
C	481m N	Old Chalk Pits	1956	1959255
C	481m N	Unspecified Disused Pit	1982	1855237
C	487m N	Old Chalk Pits	1894	1954858

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	0

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	0

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m	0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill

Site Outline

Search buffers in metres (m)

Historical waste sites

Licensed waste sites

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m	0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.5 Historical waste sites

Records within 500m	2

Waste site records derived from Local Authority planning records and high detail historical mapping.

Features are displayed on the Waste and landfill map on **page 21 >**

ID	Location	Address	Further Details	Date
B	80m NE	Site Address: Veolia Composting Facility, Bushywarren Lane, Herriard, Basingstoke, Hampshire, RG25 2NS	Type of Site: Waste Recycle Plant Planning application reference: 17/03430/CMA Description: Scheme comprises construction of additional plant to recycle compost oversize material including importation of similar oversize material, case officer amy dales, application HCC/2017/0692 please note the decision on this application is made by the Hamps hire County Council. The associated works include sewer systems, landscaping, infrastructure, enabling, cable laying and access roads. Data source: Historic Planning Application Data Type: Point	-

ID	Location	Address	Further Details	Date
B	109m NE	Site Address: Little Bushywarren Copse, Herriard, BASINGSTOKE, Hampshire	Type of Site: Recycling Plant (Alterations/Extension) Planning application reference: BDB56369 Description: Scheme comprises extensions to composting centre as part of Project Integra, with a new concrete slab of 40,000 sqm, an open-fronted storage building of 1,950 sqm, single storey building of 162 sqm to form offices, meeting room, mess room, computer roo changing room and WC's, together with new weighbridge, new balancing lagoons, amenity pond, re-fuelling point, loading shed, new link roadn and landscaping works. Construction - facing brick walls; pitched roof; steel frame; bathroom fittings. An applic ation (ref: BDB56369) for Detailed Planning permission was granted by Basingstoke & Deane B.C. on 1st November 2003. Planning decision obtained Data source: Historic Planning Application Data Type: Point	-

This data is sourced from Ordnance Survey/Groundsure and Local Authority records.

3.6 Licensed waste sites

Records within 500m **11**

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on **page 21 >**

ID	Location	Details		
A	**On site**	**Site Name: Herriard Bio Power Limited** **Site Address: Site Office, Bushywarren Lane, Herriard, Basingstoke, Hampshire, RG25 2NS** **Correspondence Address: -**	**Type of Site: Biological Treatment Facility** **Size: 25000 tonnes** **Environmental Permitting Regulations (Waste) Licence Number: HER057** **EPR reference: EA/EPR/AB3807KW/A001** **Operator: Herriard Bio Power Limited** **Waste Management licence No: 400890** **Annual Tonnage: 36500**	**Issue Date: 20/01/2014** **Effective Date: -** **Modified: -** **Surrendered Date: -** **Expiry Date: -** **Cancelled Date: -** **Status: Issued**

ID	Location	Details		
A	**On site**	**Site Name: Herriard Bio Power Limited** **Site Address: Herriard Bio Power Limited, Site Office, Bushywarren Lane, Herriard, Basingstoke, Hampshire, RG25 2NS** **Correspondence Address: -**	**Type of Site: Biological Treatment Facility** **Size: >= 25000 tonnes 75000 tonnes** **Environmental Permitting Regulations (Waste) Licence Number: 647462** **EPR reference: EA/EPR/AB3807KW** **Operator: Herriard Bio Power Limited** **Waste Management licence No: 400890** **Annual Tonnage: 36500**	**Issue Date: 20/01/2014** **Effective Date: 20/01/2014** **Modified: -** **Surrendered Date: -** **Expiry Date: -** **Cancelled Date: 20/01/2014** **Status: Issued**
B	75m E	Site Name: Little Bushywarren Copse Composting Facility Depot Site Address: Bushywarren Lane, Herriard, Hampshire, RG25 2NS Correspondence Address: Poles Lane, Otterbourne, Winchester, Hampshire, SO21 2EA	Type of Site: Composting Facility Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ONY039 EPR reference: - Operator: Onyx Hampshire Ltd Waste Management licence No: 10253 Annual Tonnage: 0	Issue Date: 16/12/2004 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
B	75m E	Site Name: Little Bushy Warren Composting Facility Site Address: Little Bushy Warren Composting Facility, Bushy Warren Lane, Herriard, Hampshire, RG25 2NS Correspondence Address: -	Type of Site: Composting Facility Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ONY039 EPR reference: EA/EPR/JP3795HX/V002 Operator: Veolia E S Hampshire Ltd Waste Management licence No: 10253 Annual Tonnage: 99999	Issue Date: 16/12/2004 Effective Date: - Modified: 18/10/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified
B	75m E	Site Name: Little Bushy Warren Composting Facility Site Address: Little Bushy Warren Composting Facility, Bushy Warren Lane, Herriard, Hampshire, RG25 2NS Correspondence Address: -	Type of Site: Composting Facility Size: >= 25000 tonnes 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ONY039 EPR reference: EA/EPR/JP3795HX/V005 Operator: Veolia Environmental Services Hampshire Ltd Waste Management licence No: 10253 Annual Tonnage: 99999	Issue Date: 16/12/2004 Effective Date: - Modified: 08/03/2016 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: To PPC

ID	Location	Details		
B	75m E	Site Name: Little Bushy Warren Composting Facility EPR/JP3795HX Site Address: Veolia Es Hampshire Ltd, Little Bushy Warren Composting Facility, Bushy Warren Lane, Herriard, Hampshire, RG25 2NS Correspondence Address: -	Type of Site: Composting Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 649132 EPR reference: EA/EPR/JP3795HX Operator: Veolia Es Hampshire Ltd Waste Management licence No: 10253 Annual Tonnage: 99999	Issue Date: 08/03/2016 Effective Date: 08/03/2016 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: 08/03/2016 Status: Issued
C	86m E	Site Name: Little Bushy Warren Copse Site Address: Bushywarren Lane, Little Bushy Warren Copse, Herriard, Hampshire, RG25 2NS Correspondence Address: Poles Lane, Otterbourne, Hampshire, SO21 2EA	Type of Site: Composting Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ONY013 EPR reference: - Operator: Onyx (hampshire) Ltd Waste Management licence No: 19805 Annual Tonnage: 0	Issue Date: 26/09/1997 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
C	86m E	Site Name: Little Bushy Warren Copse Site Address: Veolia Es Hampshire Ltd, Bushy Warren Lane, Little Bushy Warren Copse, Herriard, Hampshire, RG25 2NS Correspondence Address: -	Type of Site: Composting Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 635980 EPR reference: EA/EPR/PP3892HK Operator: Veolia Es Hampshire Ltd Waste Management licence No: 19805 Annual Tonnage: 62	Issue Date: 26/09/1997 Effective Date: 26/09/1997 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: 26/09/1997 Status: Expired
B	124m NE	Site Name: Little Bushy Warren Copse Site Address: Bushy Warren Lane, Little Bushy Warren Copse, Herriard, Hampshire, RG25 2NS Correspondence Address: -	Type of Site: Composting Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ONY012 EPR reference: EA/EPR/AP3595HW/V002 Operator: Veolia E S Hampshire Ltd Waste Management licence No: 10200 Annual Tonnage: 24999	Issue Date: 10/09/1998 Effective Date: - Modified: 08/12/2004 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified

ID	Location	Details		
B	124m NE	Site Name: Little Bushy Warren Copse Site Address: Veolia Es Hampshire Ltd, Bushy Warren Lane, Little Bushy Warren Copse, Herriard, Hampshire, RG25 2NS Correspondence Address: -	Type of Site: Composting Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: 657328 EPR reference: EA/EPR/AP3595HW Operator: Veolia Es Hampshire Ltd Waste Management licence No: 10200 Annual Tonnage: 24999	Issue Date: 10/09/1998 Effective Date: 10/09/1998 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: 10/09/1998 Status: Expired
2	184m NE	Site Name: Little Bushy Warren Copse Site Address: Bushy Warren Lane, Little Bushy Warren Copse, Herriard, Hampshire, RG25 2NS Correspondence Address: Poles Lane, Otterbourne, Hampshire, SO21 2EA	Type of Site: Composting Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ONY012 EPR reference: - Operator: Onyx (hampshire) Ltd Waste Management licence No: 10200 Annual Tonnage: 0	Issue Date: 10/09/1998 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued

This data is sourced from the Environment Agency and Natural Resources Wales.

3.7 Waste exemptions

Records within 500m **2**

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 21 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	**On site**	**-**	**WEX276574**	**Using waste exemption**	**Not on a farm**	**Use of waste in construction**
A	**On site**	**SITE OFFICE, BUSHYWARREN LANE, HERRIARD, BASINGSTOKE, RG25 2NS**	**WEX109566**	**Using waste exemption**	**On a farm**	**Use of waste in construction**

This data is sourced from the Environment Agency and Natural Resources Wales.

4 Current industrial land use

Site Outline

Search buffers in metres (m)

Recent industrial land uses

Part A(1) industrial activities

Licensed Discharges to controlled waters

Pollution inventory waste transfers

4.1 Recent industrial land uses

Records within 250m	3

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 27 >**

ID	Location	Company	Address	Activity	Category
1	**On site**	**Green Waste Composting Facility (Waste AD) - Anaerobic Digestion (BEIS)**	**Green Waste Composting Facility, Bushywarren Lane, Ellisfield, Hampshire, RG25 2NS**	**Energy Production**	**Industrial Features**
2	9m N	Slurry Beds	Hampshire, RG25	Waste Storage, Processing and Disposal	Infrastructure and Facilities
5	125m NE	Veolia Environnement	Fryingdown Solar Park, Bushywarren Lane, Ellisfield, Hampshire, RG25 2NS	Recycling, Reclamation and Disposal	Recycling Services

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	**0**

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	**0**

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	**0**

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.10 Licensed industrial activities (Part A(1))

Records within 500m	2

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on **page 27 >**

ID	Location	Details	
A	75m E	Operator: Veolia ES Hampshire Limited Installation Name: Little Bushy Warren Composting Facility EPR/JP3795HX Process: RECOVERY OR A MIX OF RECOVERY AND DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING BIOLOGICAL TREATMENT Permit Number: HP3236WU Original Permit Number: HP3236WU	EPR Reference: - Issue Date: 08/03/2016 Effective Date: 08/03/2016 Last date noted as effective: 21/03/2023 Status: Effective
A	75m E	Operator: VEOLIA ES HAMPSHIRE LTD Installation Name: Little Bushy Warren Composting Facility EPR/JP3795HX Process: RECOVERY OR A MIX OF RECOVERY AND DISPOSAL OF > 75 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING BIOLOGICAL TREATMENT Permit Number: JP3795HX Original Permit Number: HP3236WU	EPR Reference: EPR/JP3795HX Issue Date: 08/03/2016 Effective Date: 08/03/2016 Last date noted as effective: 25/05/2023 Status: Effective

This data is sourced from the Environment Agency and Natural Resources Wales.

4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m	0

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	0

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.13 Licensed Discharges to controlled waters

Records within 500m	4

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on **page 27 >**

ID	Location	Address	Details	
3	28m NW	VEOLIA COMPOSTING FACILITY, VEOLIA COMPOSTING FACILITY, LITTLE BUSHYWARREN COPSE, HERRIARD, BASINGSTOKE, HAMPSHIRE, RH25 2NS	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: EPRCP3821GT Permit Version: 1 Receiving Water: GROUNDWATER	Status: NEW ISSUED UNDER EPR 2010 Issue date: 08/08/2011 Effective Date: 08/08/2011 Revocation Date: -
4	113m NE	VEOLIA COMPOSTING FACILITY, VEOLIA COMPOSTING FACILITY, LITTLE BUSHYWARREN COPSE, HERRIARD, BASINGSTOKE, HAMPSHIRE, RH25 2NS	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: G00849 Permit Version: 1 Receiving Water: GROUNDWATER VIA SOAKAWAY	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 26/05/2006 Effective Date: 06/06/2006 Revocation Date: -
B	180m NE	WELLSITE HG A, HUMBLY GROVE OILFIED, HUMBLY GROVE OIL FIELD, ODIHAM ROAD, POWNTLEY COPSE, NR ALTON, HAMPSHIRE, RG29 1RY	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTWC.0345 Permit Version: 1 Receiving Water: CHALK	Status: REVOKED - UNSPECIFIED Issue date: 02/09/1985 Effective Date: 02/09/1985 Revocation Date: 12/08/1996
B	180m NE	WELLSITE HG A, HUMBLY GROVE OILFIED, HUMBLY GROVE OIL FIELD, ODIHAM ROAD, POWNTLEY COPSE, NR ALTON, HAMPSHIRE, RG29 1RY	Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: CTWC.0344 Permit Version: 1 Receiving Water: CHALK	Status: REVOKED - UNSPECIFIED Issue date: 02/09/1985 Effective Date: 02/09/1985 Revocation Date: 14/04/1992

This data is sourced from the Environment Agency and Natural Resources Wales.

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.16 List 1 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.17 List 2 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 Pollution Incidents (EA/NRW)

Records within 500m	0

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution inventory substances

Records within 500m	0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.20 Pollution inventory waste transfers

Records within 500m	1

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

Features are displayed on the Current industrial land use map on **page 27 >**

ID: A, Location: 75m E, Permit: JP3795HX
Operator: Veolia ES Hampshire Limited
Activity: RECOVERY OR A MIX OF RECOVERY AND DISPOSAL OF > 50 T/D NON-HAZARDOUS WASTE (> 100 T/D IF ONLY AD) INVOLVING BIOLOGICAL TREATMENT
Address: Little Bushy Warren Composting Facility Bushy Warren Lane Herriard Hampshire RG25 2NS
Sector: Biowaste Treatment, Sub-sector: Biowaste Treatment
Releases:

Route	Route description	Quantity (tonnes)	Release level	EWC code	EWC description	Hazardous waste
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection, on the site where it is produced)	262.66	absolute value	16 10 02	aqueous liquid wastes other than those mentioned in 16 10 01	No
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	2276.96	absolute value	19 05 01	non-composted fraction of municipal and similar wastes	No
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	2703.32	absolute value	19 05 03	off-specification compost	No
D5	Specially engineered landfill (eg placement into lined discrete cells which are capped and isolated from one another and the environment, etc)	740.19	absolute value	19 05 03	off-specification compost	No
R4	Recycling/reclamation of metals and metal compounds	19.56	absolute value	19 12 02	ferrous metal	No
R4	Recycling/reclamation of metals and metal compounds	57.14	absolute value	20 01 40	metals	No

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.21 Pollution inventory radioactive waste

Records within 500m	0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

5 Hydrogeology - Superficial aquifer

Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive
- Unknown

5.1 Superficial aquifer

Records within 500m	2

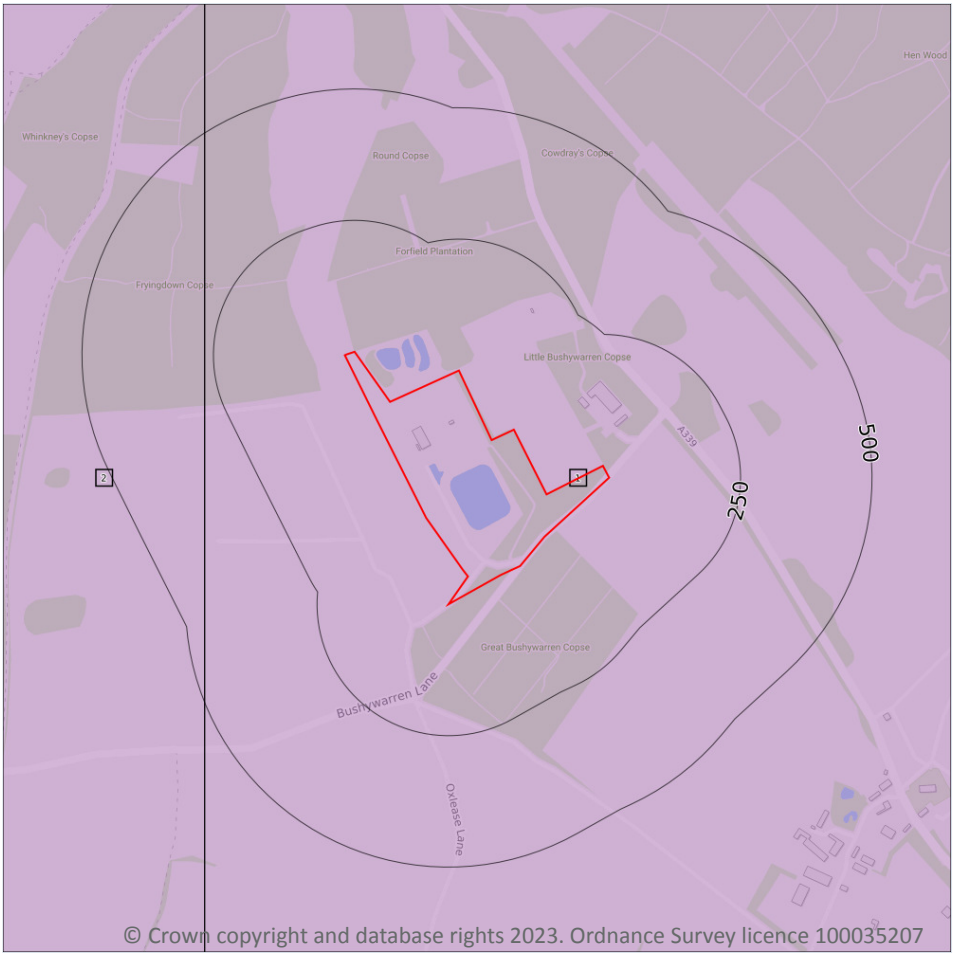
Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 35 >**

ID	Location	Designation	Description
1	**On site**	**Unproductive**	**These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow**
2	267m NW	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Bedrock aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive

5.2 Bedrock aquifer

Records within 500m	2

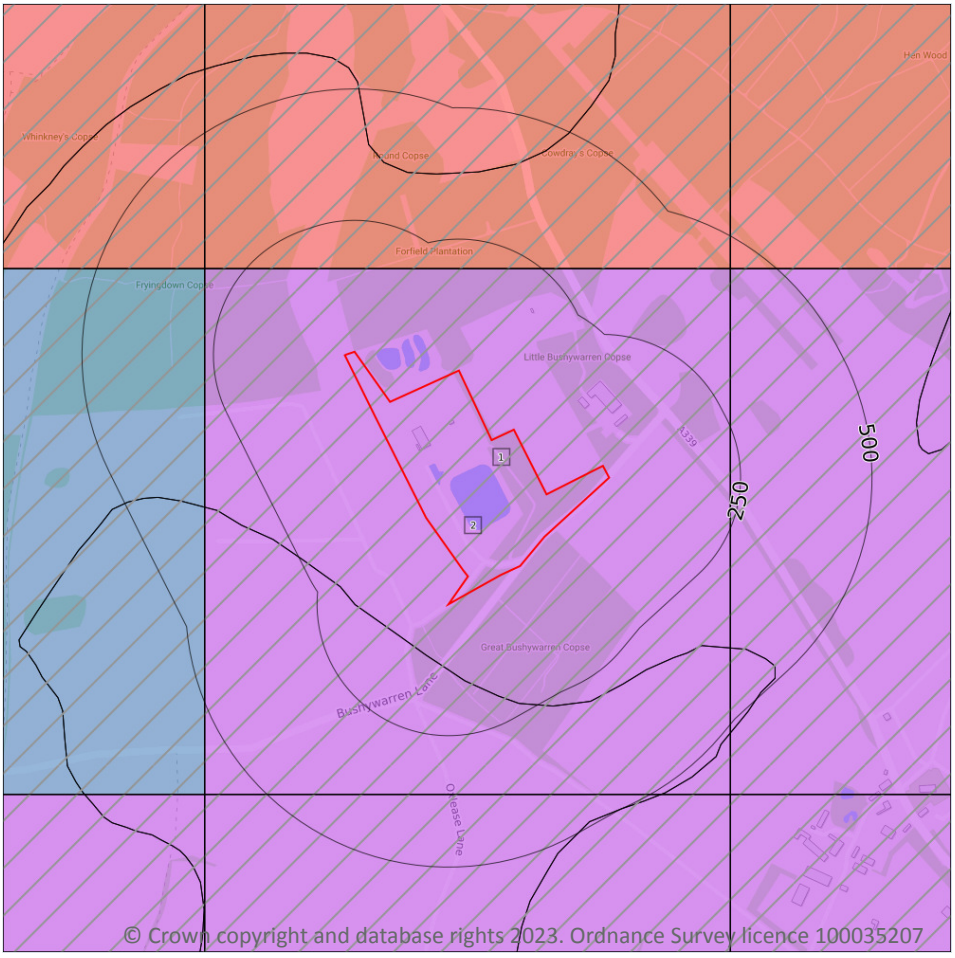
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 36 >**

ID	Location	Designation	Description
1	**On site**	**Principal**	**Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers**
2	267m NW	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	1

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 38 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	**Summary Classification: Principal bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Unproductive Superficial Aquifer**	**Leaching class: Intermediate Infiltration value: >70% Dilution value: 300-550mm/year**	**Vulnerability: Unproductive Aquifer type: Unproductive Thickness: 3-10m Patchiness value: <90% Recharge potential: Low**	**Vulnerability: Medium Aquifer type: Principal Flow mechanism: Well connected fractures**

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

5.4 Groundwater vulnerability- soluble rock risk

Records on site	**1**

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
2	**Very significant soluble rocks are likely to be present with a moderate possibility of localised natural subsidence or dissolution-related degradation of bedrock, especially in adverse conditions such as concentrated surface or subsurface water flow.**	**68.0%**

This data is sourced from the British Geological Survey and the Environment Agency.

5.5 Groundwater vulnerability- local information

Records on site	**0**

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk ↗.

This data is sourced from the British Geological Survey and the Environment Agency.

Abstractions and Source Protection Zones

5.6 Groundwater abstractions

Records within 2000m	0

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m	0

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.8 Potable abstractions

Records within 2000m	0

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m	0

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.

6 Hydrology

Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	0

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	4

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on **page 42 >**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 42 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
2	**On site**	**River**	**Candover Brook**	**GB107042022620**	**Itchen**	**Test and Itchen**

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified	1

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on **page 42 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	10946m SW	River	Candover Brook	GB107042022620 ↗	Moderate	Fail	Moderate	2019

This data is sourced from the Environment Agency and Natural Resources Wales.

6.5 WFD Groundwater bodies

Records on site	1

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 42 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	**On site**	**Basingstoke Chalk**	**GB40601G501300** ↗	**Poor**	**Poor**	**Poor**	**2019**

This data is sourced from the Environment Agency and Natural Resources Wales.

7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m	0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m	0

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m	0

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 Flood Storage Areas

Records within 250m	0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

This data is sourced from the Environment Agency and Natural Resources Wales.

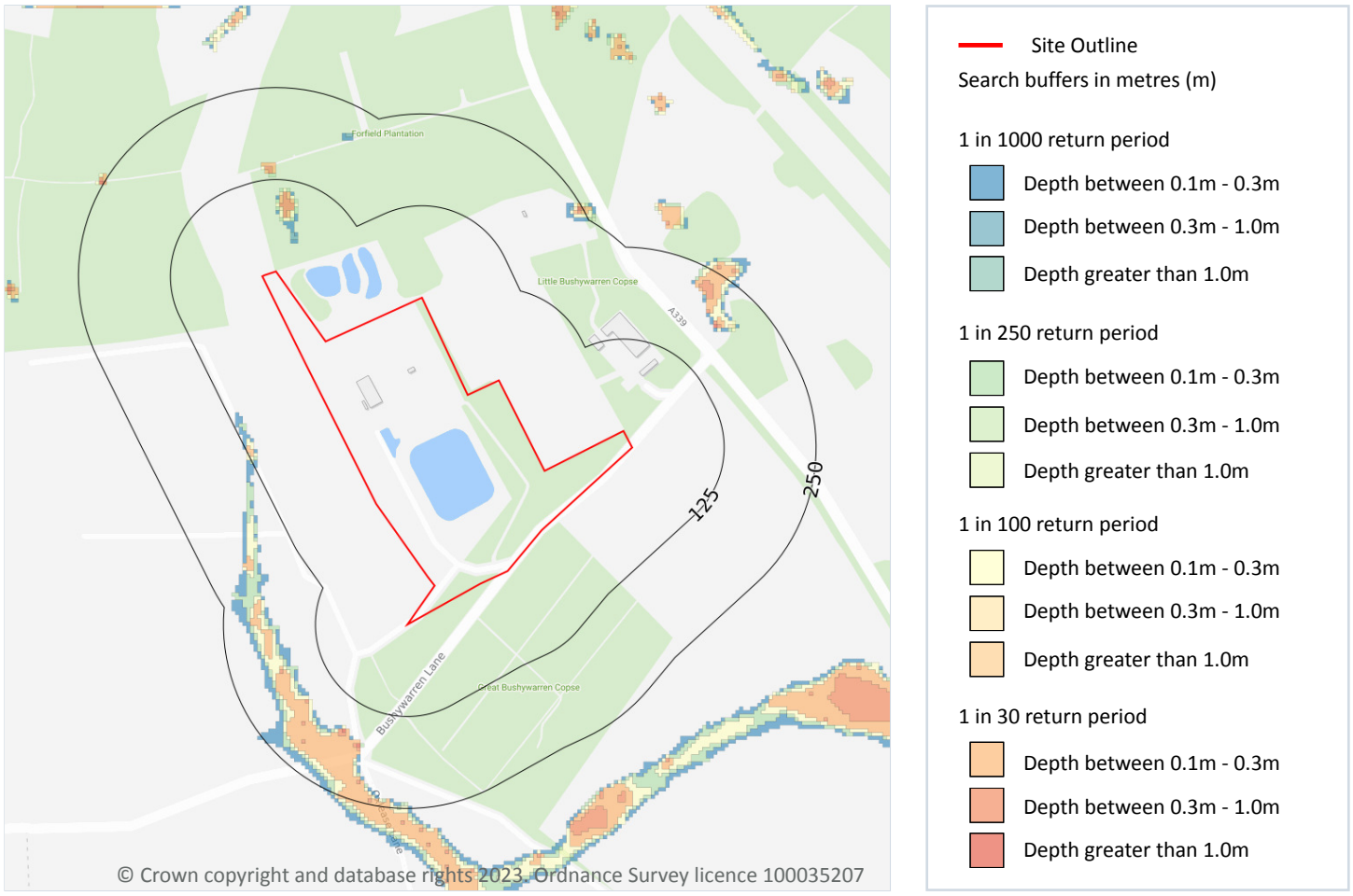
7.7 Flood Zone 3

Records within 50m	0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

8 Surface water flooding



8.1 Surface water flooding

Highest risk on site	**Negligible**
Highest risk within 50m	**1 in 1000 year, 0.3m - 1.0m**

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on **page 48 >**

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding

Site Outline

Search buffers in metres (m)

High

Moderate - High

Moderate

Low

Negligible

9.1 Groundwater flooding

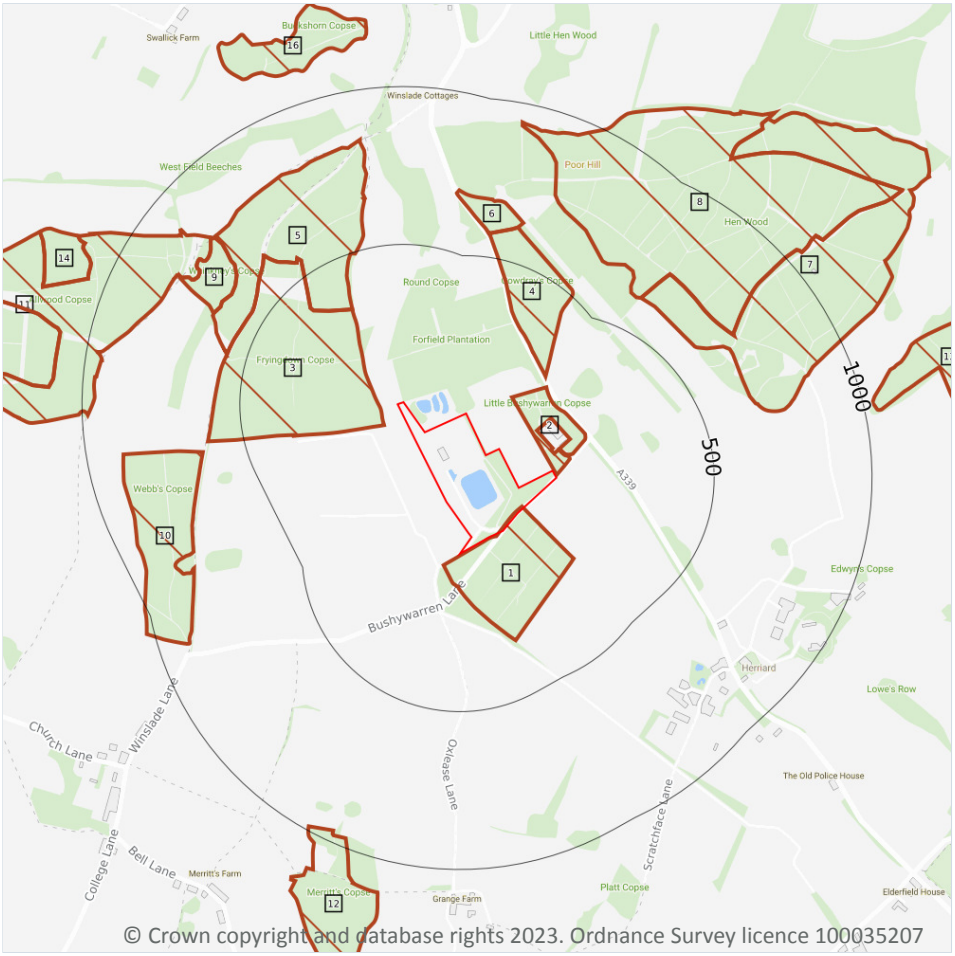
Highest risk on site	**Low**
Highest risk within 50m	**Low**

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 50 >**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



Site Outline

Search buffers in metres (m)

Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m	0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m	0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.6 Local Nature Reserves (LNR)

Records within 2000m	0

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m	32

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

Features are displayed on the Environmental designations map on **page 51 >**

ID	Location	Name	Woodland Type
1	**On site**	**Great Bushy Warren Copse**	**Ancient & Semi-Natural Woodland**
2	5m E	Unknown	Ancient & Semi-Natural Woodland
3	56m NW	Kingsmoor Copse	Ancient Replanted Woodland
4	273m NE	Unknown	Ancient & Semi-Natural Woodland
5	333m NW	Kingsmoor Copse	Ancient & Semi-Natural Woodland
6	576m N	Unknown	Ancient Replanted Woodland
7	596m NE	Hen Wood	Ancient & Semi-Natural Woodland
8	610m NE	Hen Wood	Ancient Replanted Woodland
9	631m NW	Kingsmoor Copse	Ancient Replanted Woodland
10	635m W	Kingsmoor Copse	Ancient Replanted Woodland
11	750m NW	Kingsmoor Copse	Ancient & Semi-Natural Woodland
12	964m S	Unknown	Ancient & Semi-Natural Woodland
13	1030m E	Coombe Wood	Ancient & Semi-Natural Woodland
14	1058m NW	Kingsmoor Copse	Ancient Replanted Woodland
15	1092m W	Kingsmoor Copse	Ancient Replanted Woodland
16	1096m NW	Buckshorn Copse	Ancient & Semi-Natural Woodland

ID	Location	Name	Woodland Type
-	1404m E	Coombe Wood	Ancient Replanted Woodland
-	1412m E	Coombe Wood	Ancient & Semi-Natural Woodland
-	1448m E	Coombe Wood	Ancient & Semi-Natural Woodland
-	1524m E	Coombe Wood	Ancient Replanted Woodland
-	1527m E	Coombe Wood	Ancient & Semi-Natural Woodland
-	1547m E	Coombe Wood	Ancient Replanted Woodland
-	1585m E	Coombe Wood	Ancient Replanted Woodland
-	1634m E	Coombe Wood	Ancient & Semi-Natural Woodland
-	1661m S	Unknown	Ancient Replanted Woodland
-	1698m N	Swallick Wood	Ancient Replanted Woodland
-	1701m N	Swallick Wood	Ancient & Semi-Natural Woodland
-	1752m W	Unknown	Ancient Replanted Woodland
-	1798m SE	Great Matts Copse	Ancient & Semi-Natural Woodland
-	1857m N	Swallick Wood	Ancient & Semi-Natural Woodland
-	1893m SW	Smarts/old Early Copses	Ancient & Semi-Natural Woodland
-	1981m S	Ham Copse	Ancient Replanted Woodland

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.8 Biosphere Reserves

Records within 2000m	0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m	0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m	0

Areas designated to prevent urban sprawl by keeping land permanently open.

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m	0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m	14

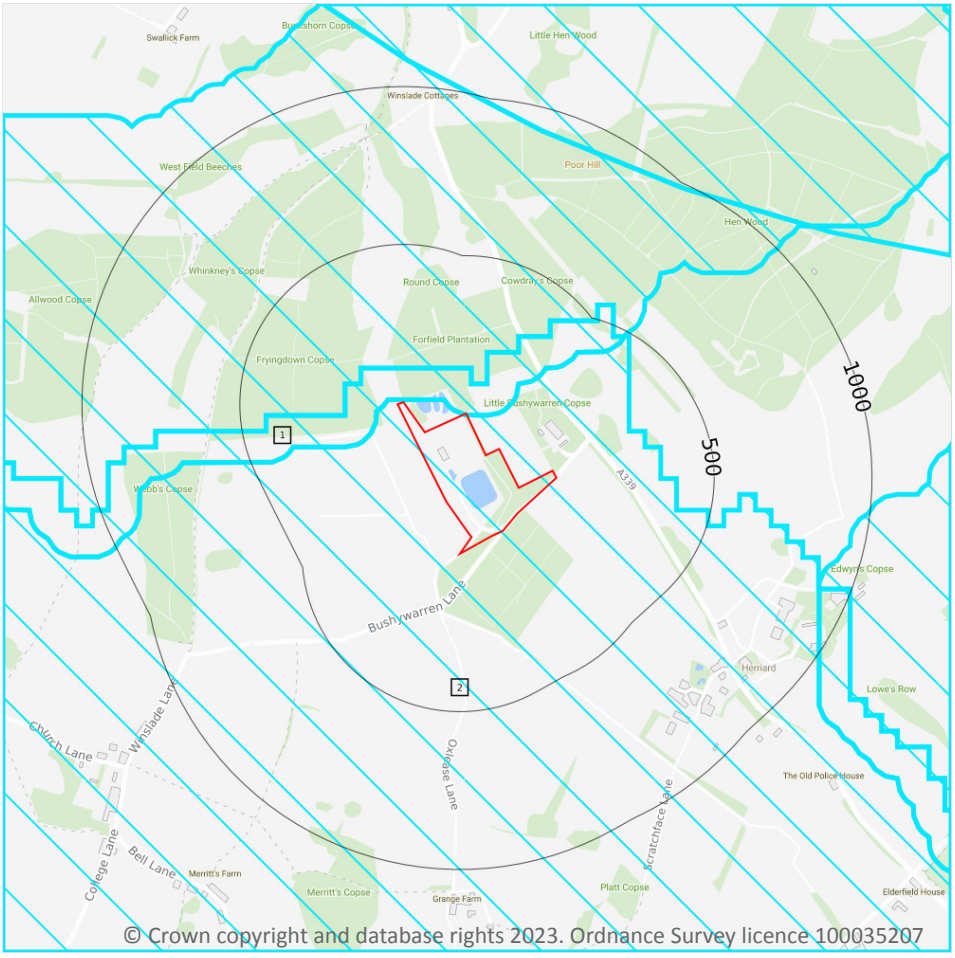
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	**Hampshire Chalk**	**Groundwater**	**143**	**Existing**
On site	**Kingsclere and Greywell**	**Groundwater**	**145**	**Existing**
On site	**Hamble Estuary Eutrophic NVZ (TraC)**	**Eutrophic Water**	**3**	**Existing**
46m NW	Loddon (Hartley Wespall to Sherfield on Loddon) NVZ	Surface Water	803	Existing
380m S	Hampshire Chalk	Groundwater	143	Existing
380m S	Hamble Estuary Eutrophic NVZ (TraC)	Eutrophic Water	3	Existing
399m NE	Hamble Estuary Eutrophic NVZ (TraC)	Eutrophic Water	3	Existing
990m SE	Kingsclere and Greywell	Groundwater	145	Existing

Location	Name	Type	NVZ ID	Status
1175m W	Loddon (Hartley Wespall to Sherfield on Loddon) NVZ	Surface Water	803	Existing
1175m W	Kingsclere and Greywell	Groundwater	145	Existing
1176m W	Hamble Estuary Eutrophic NVZ (TraC)	Eutrophic Water	3	Existing
1397m W	Hampshire Chalk	Groundwater	143	Existing
1423m SW	Hampshire Chalk	Groundwater	143	Existing
1423m SW	Hamble Estuary Eutrophic NVZ (TraC)	Eutrophic Water	3	Existing

This data is sourced from Natural England and Natural Resources Wales.

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site	2

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 58 >**

ID	Location	Type of developments requiring consultation
1	On site	**Residential - Residential development of 100 units or more. Rural residential - Any residential development of 100 or more houses outside existing settlements/urban areas. Discharges - Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream Notes: NUTRIENT IMPACT AREA. For new development with overnight accommodation Reg 63 of the Conservation of Habitats and Species Regulations 2017 must be applied and additional measures required. LPA to refer to Natural England's Nutrient Neutrality advice.**
2	On site	**Residential - Residential development of 100 units or more. Rural residential - Any residential development of 100 or more houses outside existing settlements/urban areas. Notes: NUTRIENT IMPACT AREA. For new development with overnight accommodation Reg 63 of the Conservation of Habitats and Species Regulations 2017 must be applied and additional measures required. LPA to refer to Natural England's Nutrient Neutrality advice.**

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	**0**

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

This data is sourced from Natural England and Natural Resources Wales.

11 Visual and cultural designations

Site Outline

Search buffers in metres (m)

Listed buildings

Conservation areas

Conservation areas - no data

National Parks

Areas of Outstanding Natural Beauty

Registered parks and gardens

Scheduled Monuments

World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m	0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m	0

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.5 Conservation Areas

Records within 250m	0

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m	0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

Records within 250m	1

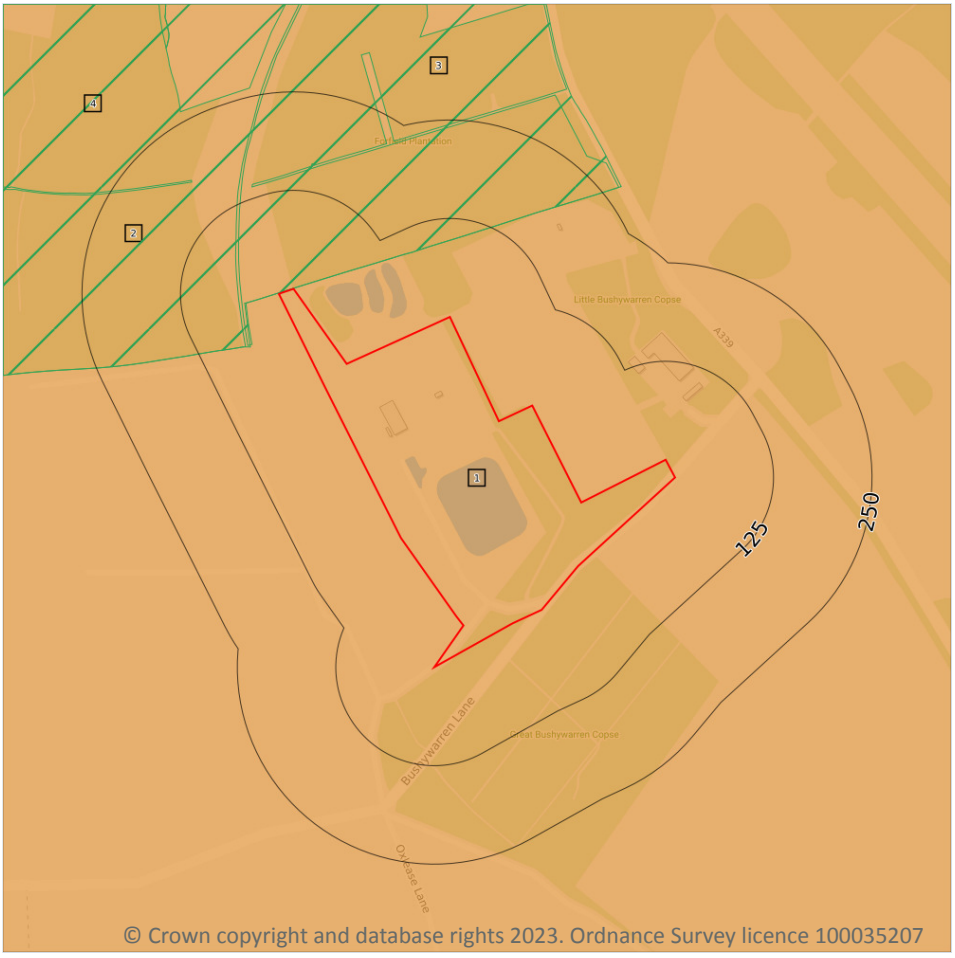
Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

Features are displayed on the Visual and cultural designations map on **page 60 >**

ID	Location	Name	Grade
1	166m E	Herriard Park	II

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

12 Agricultural designations



Site Outline

Search buffers in metres (m)

- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m	1

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on **page 63 >**

ID	Location	Classification	Description
1	On site	Grade 3	**Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.**

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m	3

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

Features are displayed on the Agricultural designations map on **page 63 >**

ID	Location	Description	Reference	Application date
2	1m NW	Selective Fell/Thin (Unconditional)	019/522/09-10	23/03/2010
3	1m NW	Selective Fell/Thin (Unconditional)	019/44/15-16	18/05/2015
4	52m NW	Selective Fell/Thin (Unconditional)	019/44/15-16	18/05/2015

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

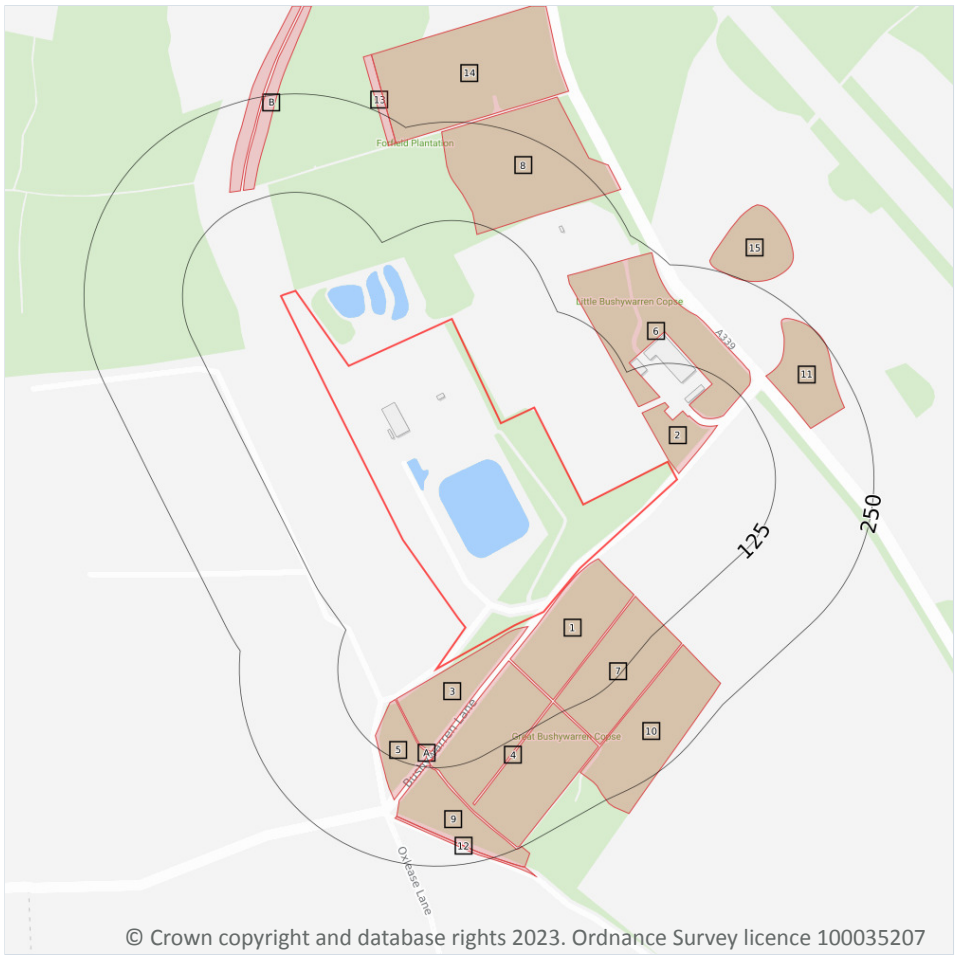
Records within 250m	8

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

Location	Reference	Scheme	Start Date	End Date
On site	**308102**	**Countryside Stewardship (Higher Tier)**	**01/01/2017**	**31/12/2021**
1m NW	624292	Countryside Stewardship (Higher Tier)	01/01/2019	31/12/2023
4m E	642187	Countryside Stewardship (Middle Tier)	01/01/2019	31/12/2023
56m S	642187	Countryside Stewardship (Middle Tier)	01/01/2019	31/12/2023
58m NW	624292	Countryside Stewardship (Higher Tier)	01/01/2019	31/12/2023
165m E	642187	Countryside Stewardship (Middle Tier)	01/01/2019	31/12/2023
208m E	308102	Countryside Stewardship (Higher Tier)	01/01/2017	31/12/2021
249m NE	308102	Countryside Stewardship (Higher Tier)	01/01/2017	31/12/2021

This data is sourced from Natural England.

13 Habitat designations



Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks
Primary Habitat
Restorable Habitat
Associated Habitats
Habitat Restoration-Creation
Network Enhancement Zone 1
Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m	19

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on **page 66 >**

ID	Location	Main Habitat	Other habitats
1	2m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	2m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	4m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	36m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

ID	Location	Main Habitat	Other habitats
5	65m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	72m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
7	74m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	105m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
8	112m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	114m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
9	122m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	139m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	143m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
10	160m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
11	166m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
12	194m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
13	219m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
14	227m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
15	249m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	**0**

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	**0**

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m	0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability

Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	2

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 69 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Partial**	**Partial**	**No coverage**	**SU64NE**
2	267m NW	Full	Partial	Partial	No coverage	SU64NW

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Artificial and made ground

Site Outline

Search buffers in metres (m)

- Reclaimed ground
- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m	5

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

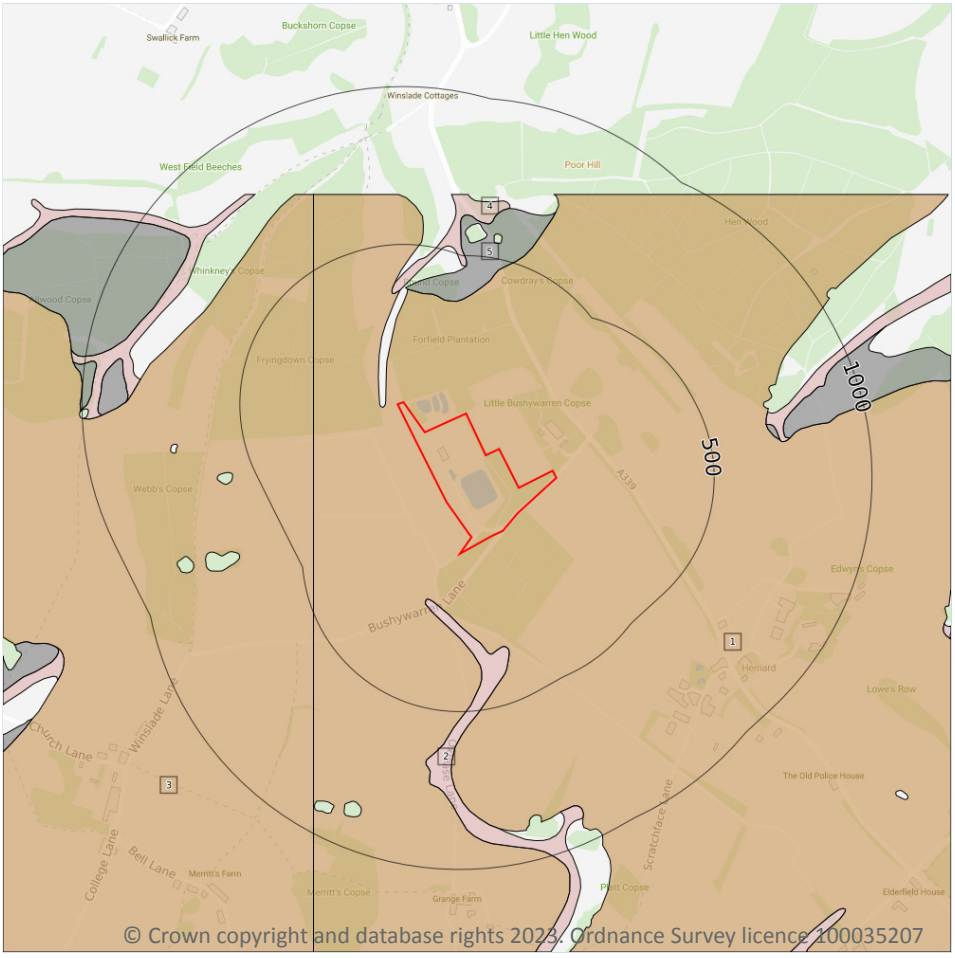
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 70 >**

ID	Location	LEX Code	Description	Rock description
1	39m NW	WGR-VOID	Worked Ground (Undivided)	Void
2	258m SE	WGR-VOID	Worked Ground (Undivided)	Void
3	286m S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	440m S	WGR-VOID	Worked Ground (Undivided)	Void

ID	Location	LEX Code	Description	Rock description
5	459m N	WGR-VOID	Worked Ground (Undivided)	Void

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m	5

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 72 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**CWF-DMTN**	**Clay-with-flints Formation - Diamicton**	**Diamicton**
2	174m S	HEAD-DMTN	Head - Diamicton	Diamicton
3	267m NW	CWF-DMTN	Clay-with-flints Formation - Diamicton	Diamicton

ID	Location	LEX Code	Description	Rock description
4	345m NW	HEAD-DMTN	Head - Diamicton	Diamicton
5	349m N	HEAD1-DMTN	Head, 1 - Diamicton	Diamicton

This data is sourced from the British Geological Survey.

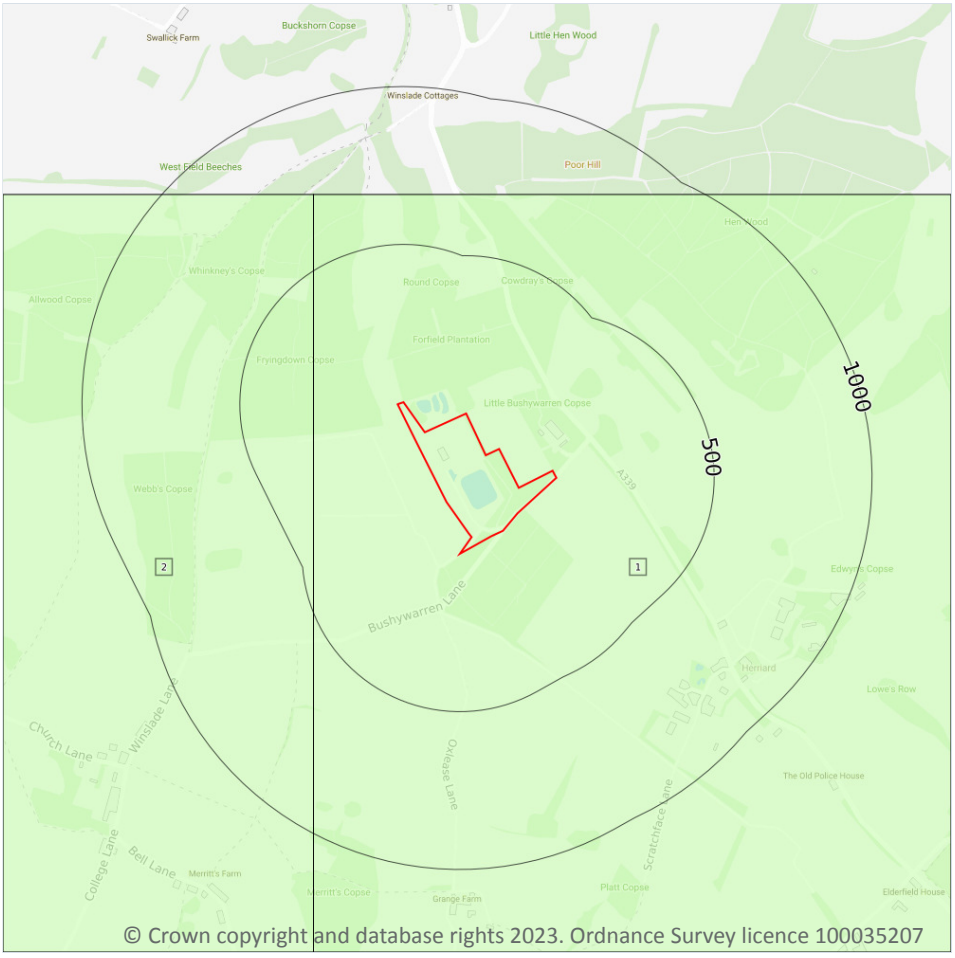
14.4 Landslip (10k)

Records within 500m	0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m	2

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 74 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**SECK-CHLK**	**Seaford Chalk Formation - Chalk**	**Santonian Age - Coniacian Age**
2	267m NW	SECK-CHLK	Seaford Chalk Formation - Chalk	Santonian Age - Coniacian Age

This data is sourced from the British Geological Survey.

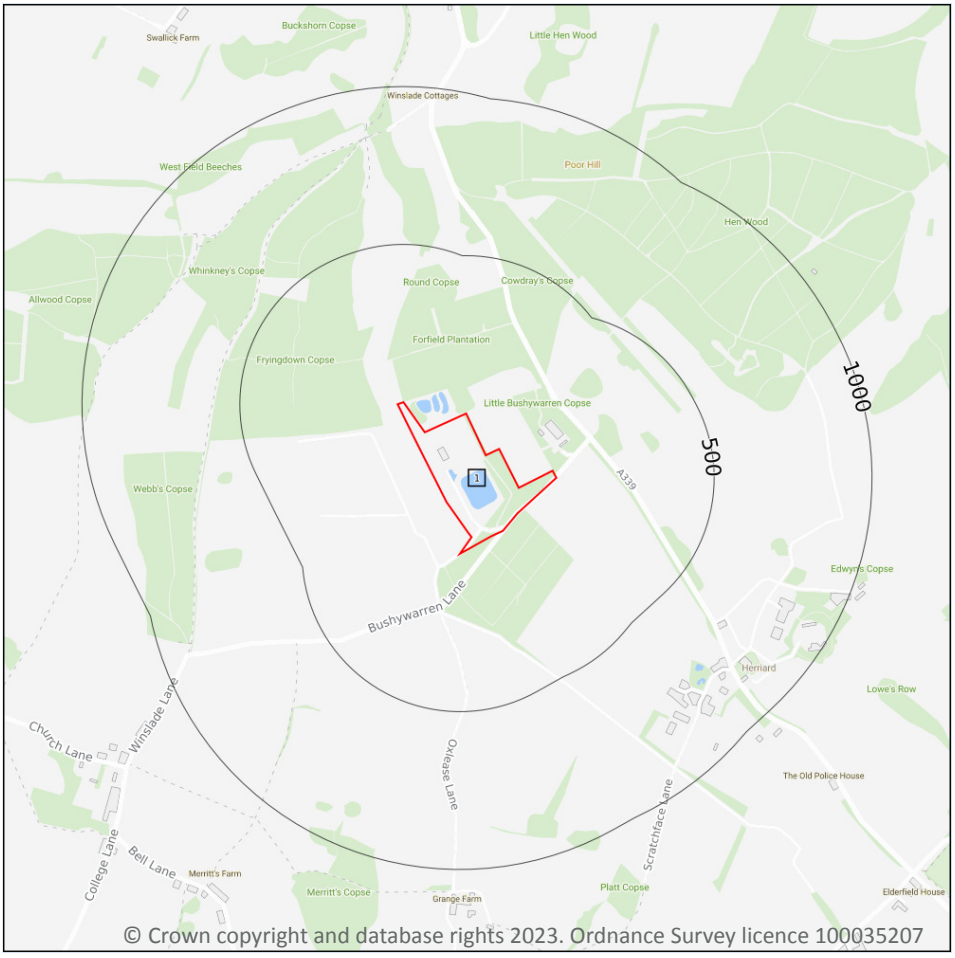
14.6 Bedrock faults and other linear features (10k)

Records within 500m	0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 76 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**No coverage**	**EW284_basingstoke_v4**

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Artificial and made ground

15.2 Artificial and made ground (50k)

Records within 500m	0

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

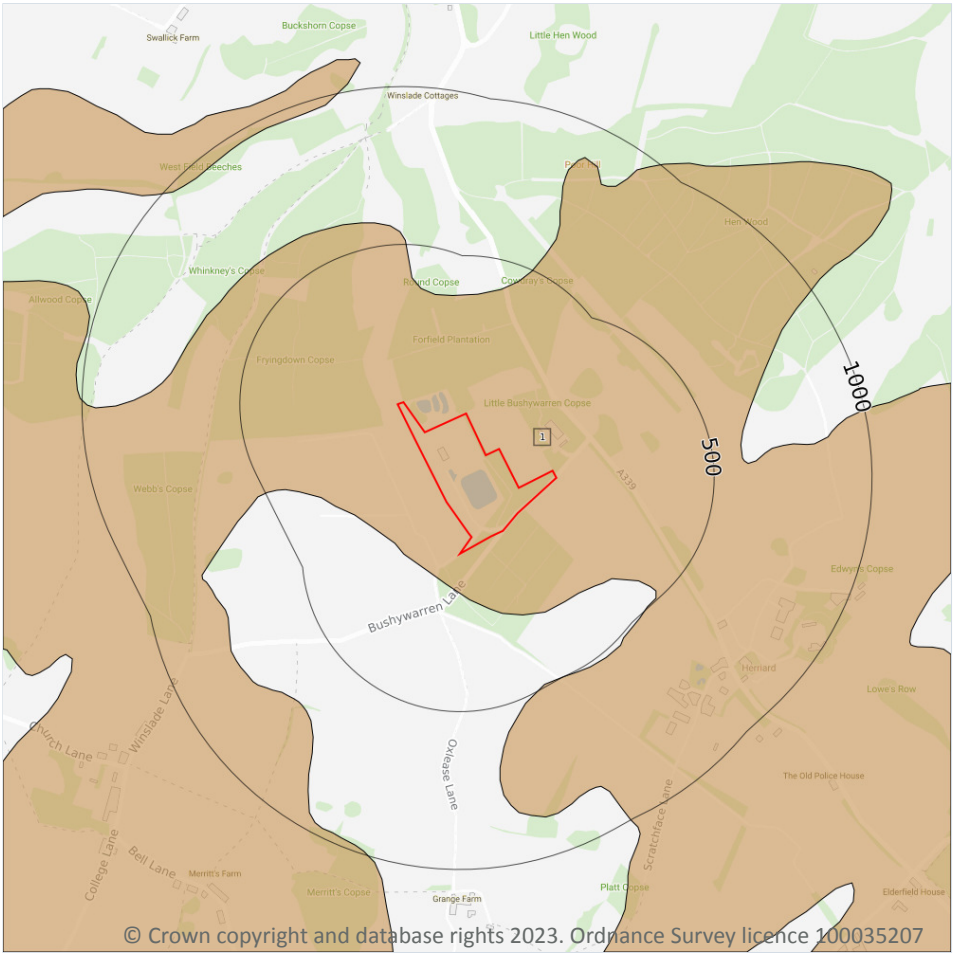
15.3 Artificial ground permeability (50k)

Records within 50m	0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m	1

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 78 >**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**CWF-XCZSV**	**CLAY-WITH-FLINTS FORMATION**	**CLAY, SILT, SAND AND GRAVEL**

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	1

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Mixed**	**High**	**Very Low**

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

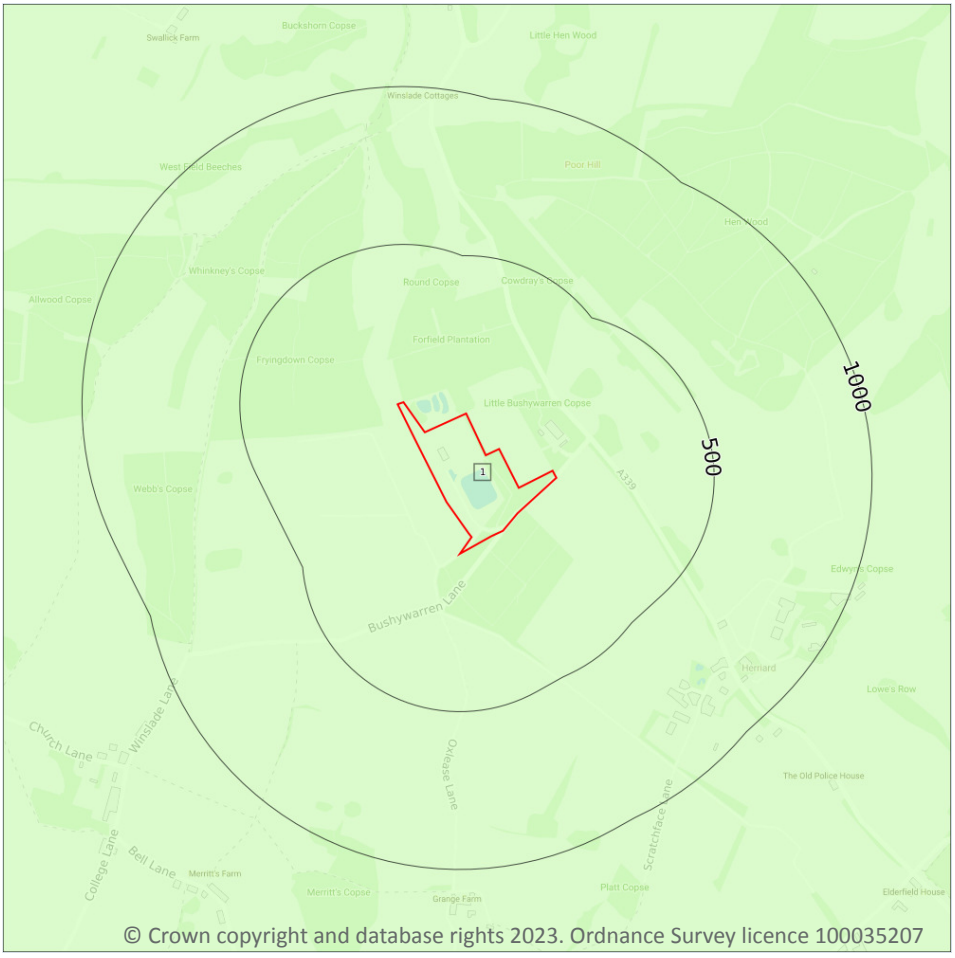
15.7 Landslip permeability (50k)

Records within 50m	0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m	1

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 80 >**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**SECK-CHLK**	**SEAFORD CHALK FORMATION - CHALK**	**CONIACIAN**

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	1

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Fracture**	**Very High**	**Very High**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	0

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

16 Boreholes

Site Outline

Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m	1

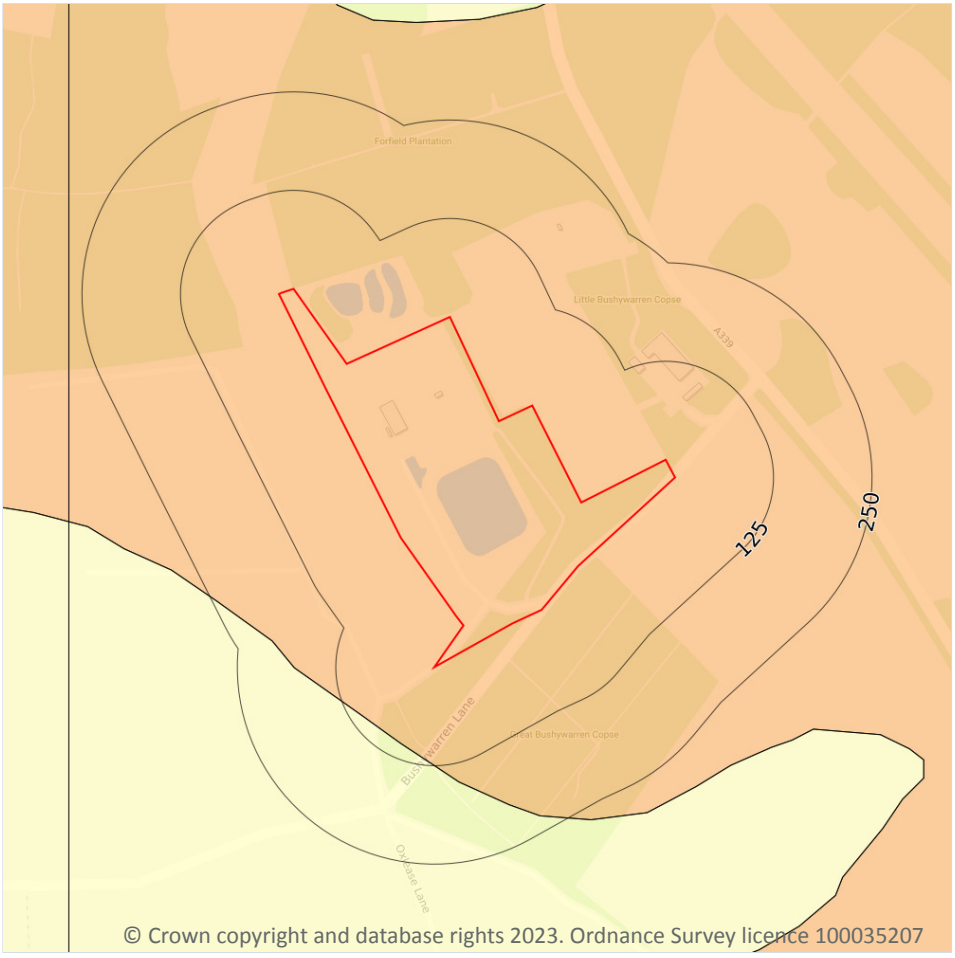
The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on **page 82 >**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	107m NE	465781 146729	HERRIARD 2	1520.95	N	421871 ↗

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.1 Shrink swell clays

Records within 50m	1

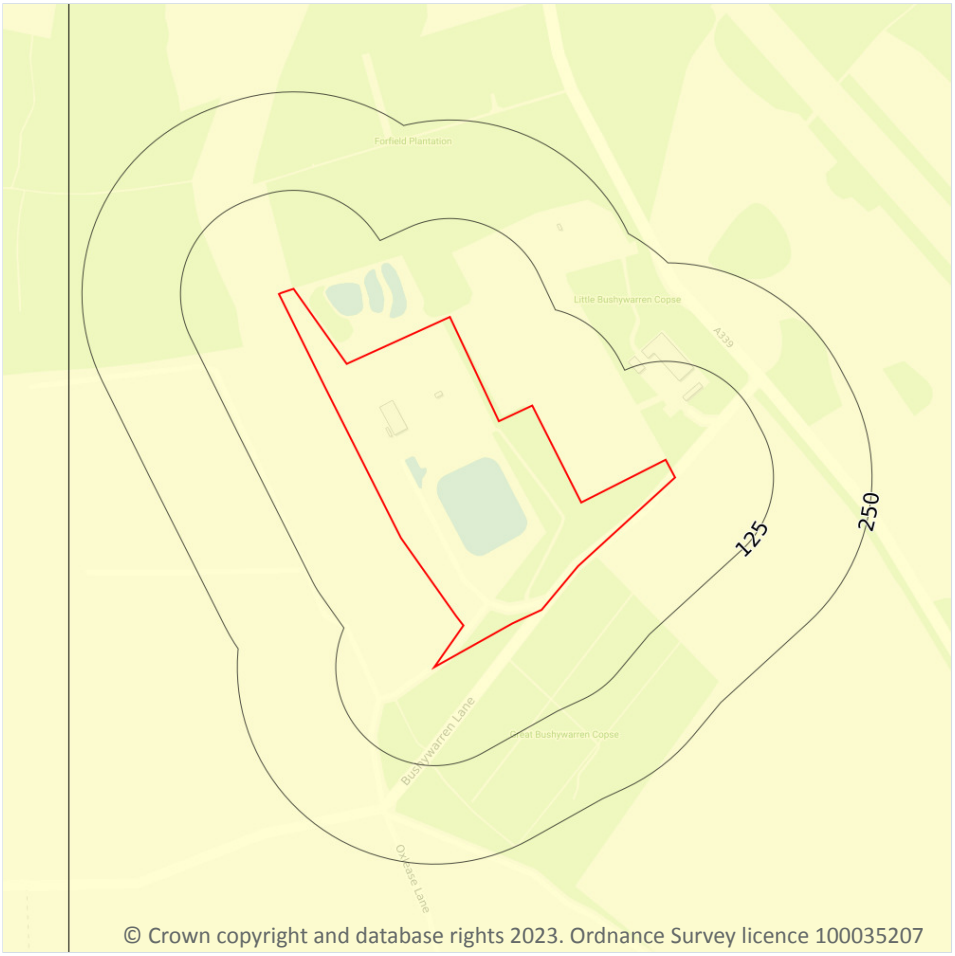
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 83 >**

Location	Hazard rating	Details
On site	**Low**	**Ground conditions predominantly medium plasticity.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.2 Running sands

Records within 50m	1

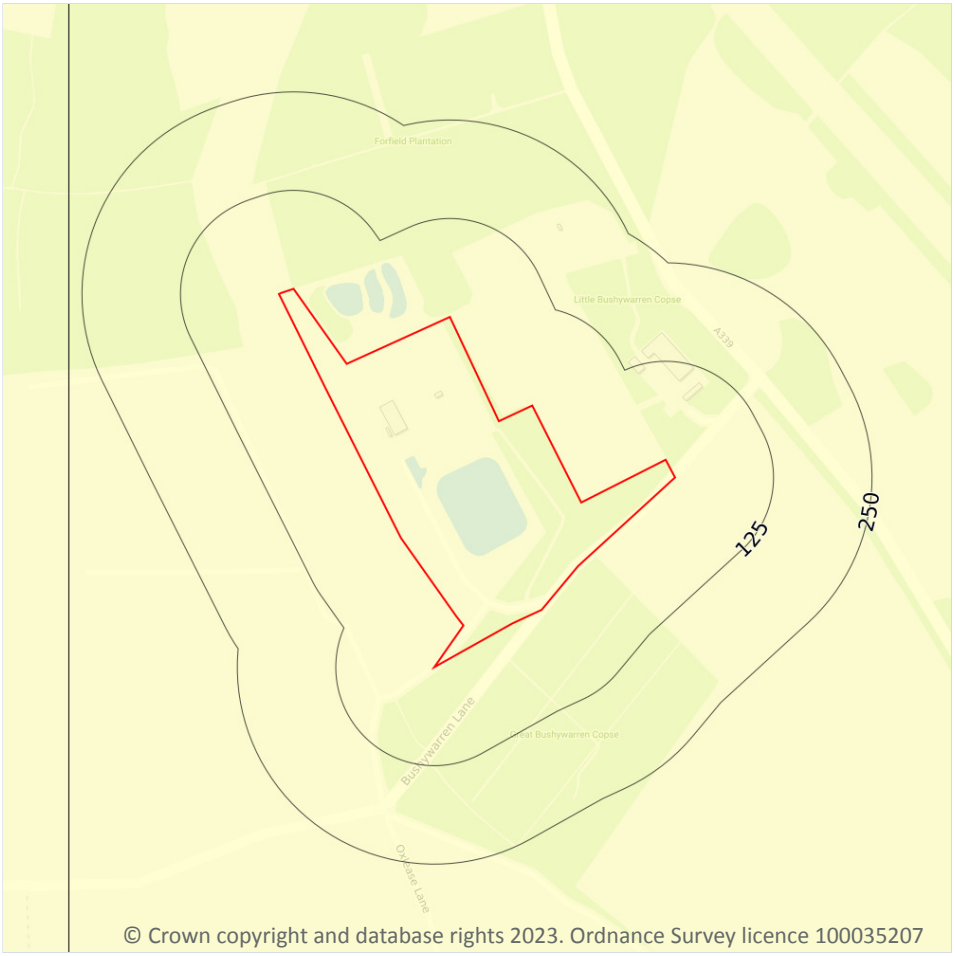
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 84 >**

Location	Hazard rating	Details
On site	**Negligible**	**Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.3 Compressible deposits

Records within 50m	1

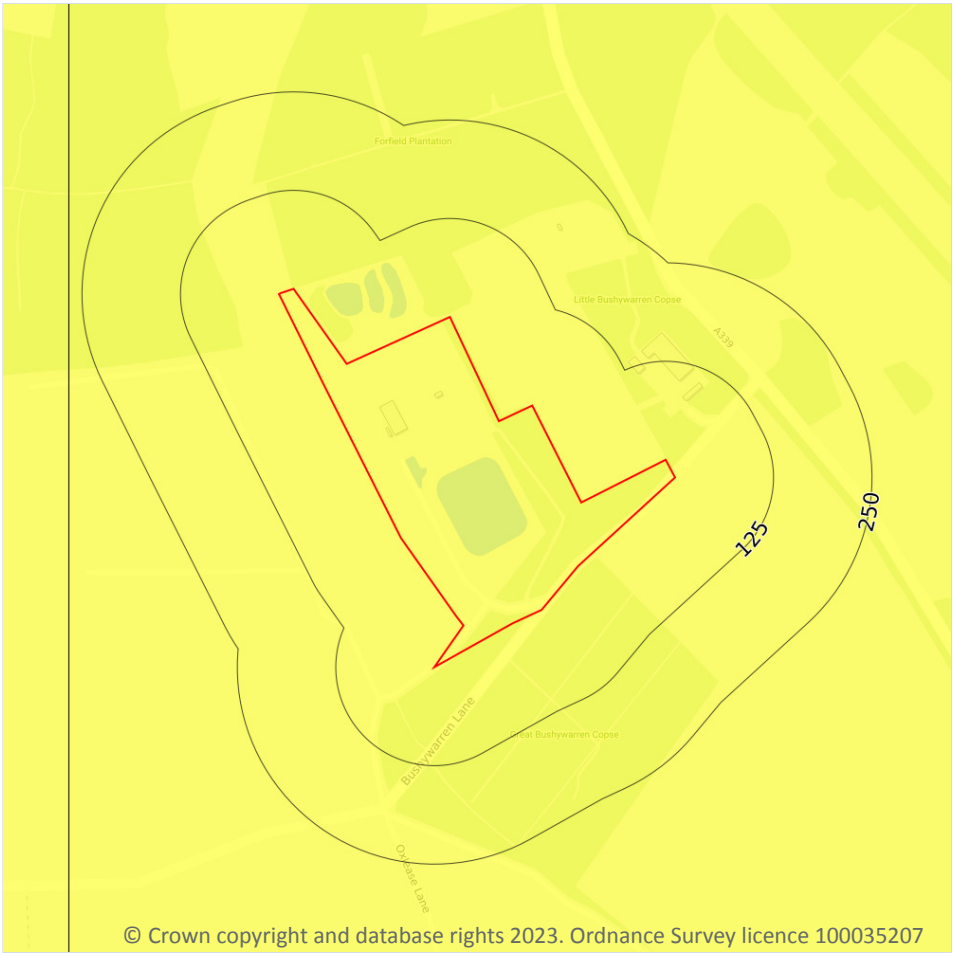
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 85 >**

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.4 Collapsible deposits

Records within 50m	1

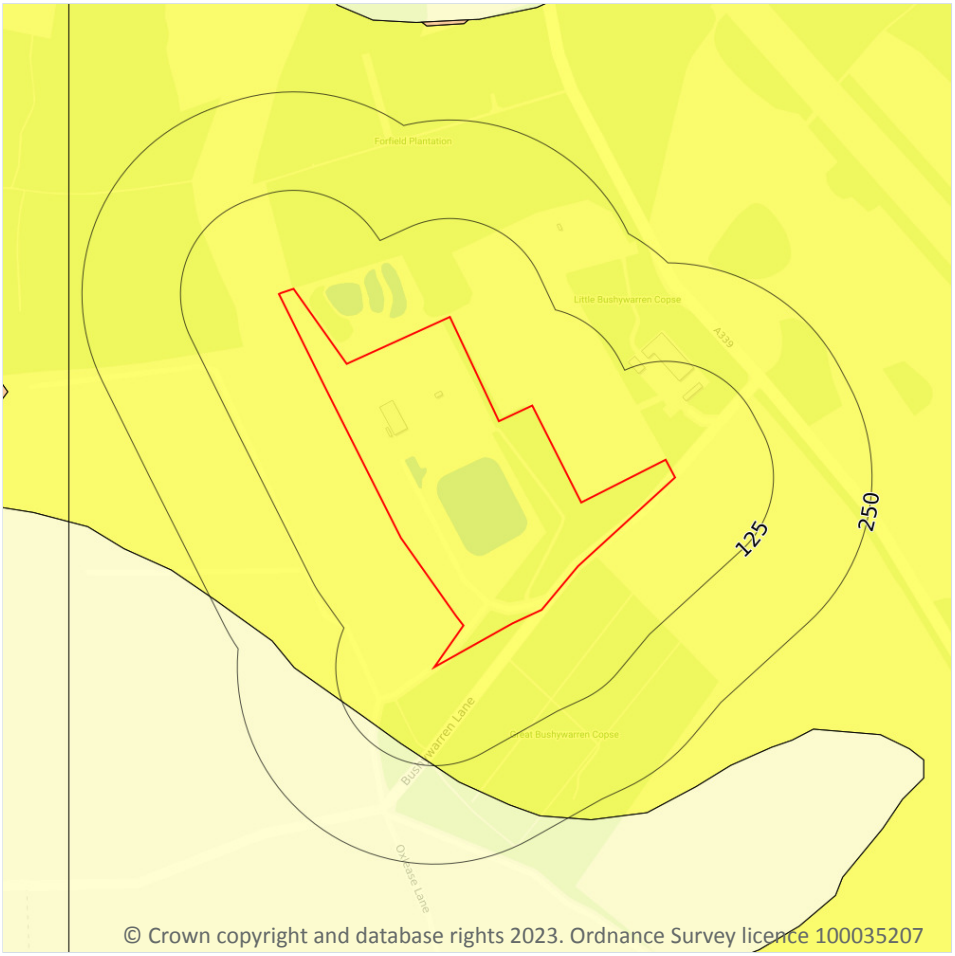
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 86 >**

Location	Hazard rating	Details
On site	**Very low**	**Deposits with potential to collapse when loaded and saturated are unlikely to be present.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.5 Landslides

Records within 50m	1

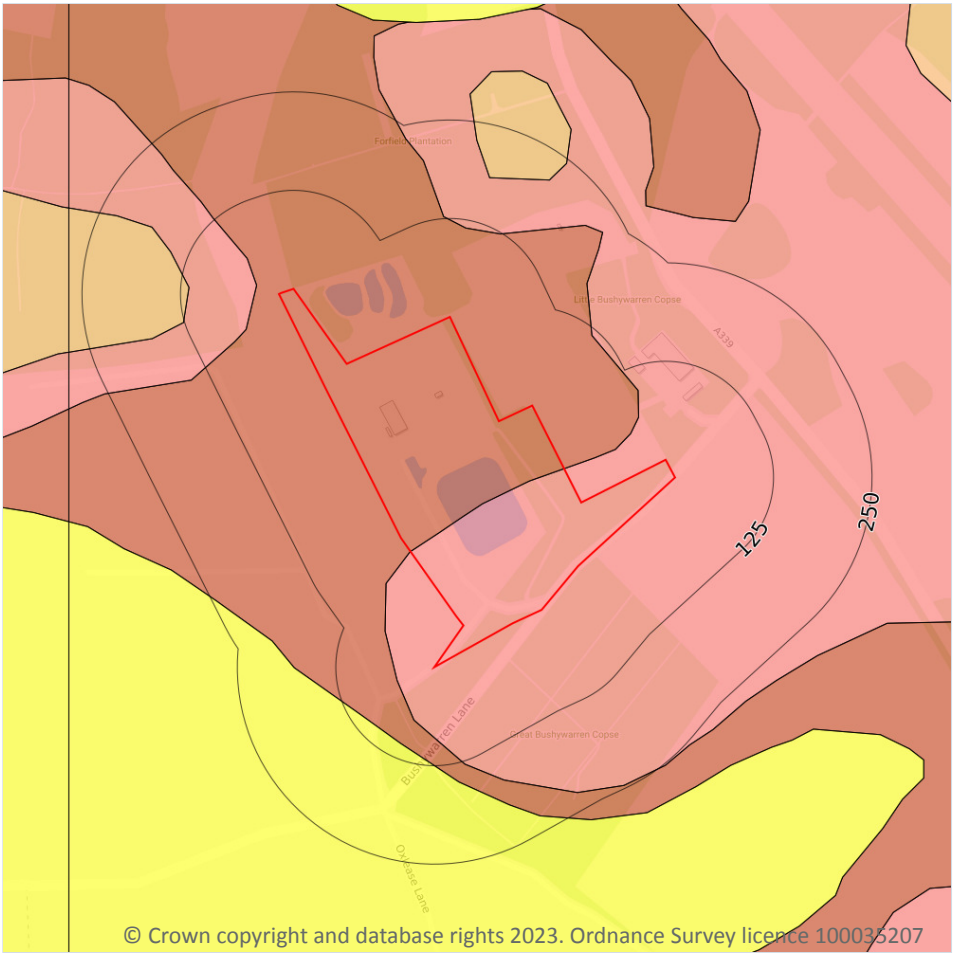
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 87 >**

Location	Hazard rating	Details
On site	**Very low**	**Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.6 Ground dissolution of soluble rocks

Records within 50m	3

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

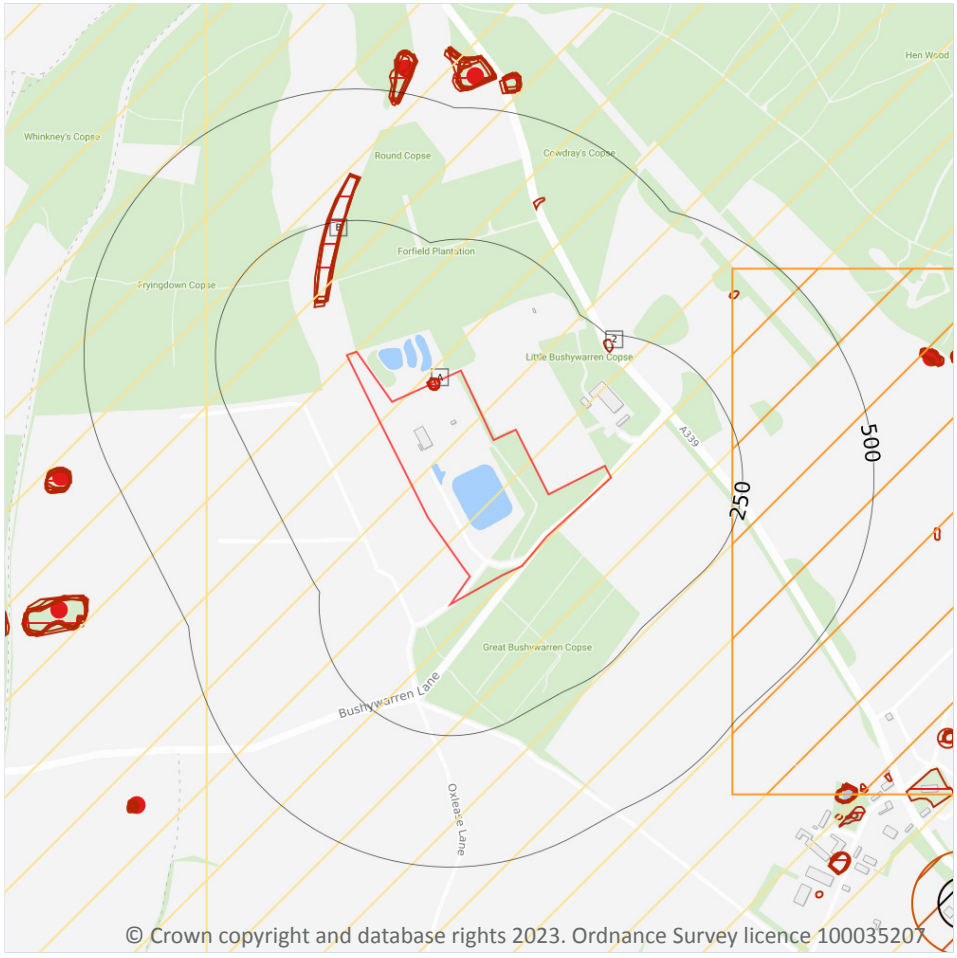
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 88 >**

Location	Hazard rating	Details
On site	**Moderate**	**Soluble rocks are present within the ground. Many dissolution features may be present. Potential for difficult ground conditions are at a level where they should be considered. Potential for subsidence is at a level where it may need to be considered.**

Location	Hazard rating	Details
On site	**High**	**Soluble rocks are present within the ground. Numerous dissolution features may be present. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered.**
30m NW	Moderate	Soluble rocks are present within the ground. Many dissolution features may be present. Potential for difficult ground conditions are at a level where they should be considered. Potential for subsidence is at a level where it may need to be considered.

This data is sourced from the British Geological Survey.

18 Mining and ground workings



Site Outline

Search buffers in metres (m)

- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining

Non Coal Mining

- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m	0

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	12

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on **page 90 >**

ID	Location	Land Use	Year of mapping	Mapping scale
A	**On site**	**Unspecified Pit**	**1956**	**1:10560**
A	**On site**	**Unspecified Pit**	**1911**	**1:10560**
A	**On site**	**Unspecified Pit**	**1872**	**1:10560**
A	**On site**	**Unspecified Pit**	**1911**	**1:10560**
A	**On site**	**Unspecified Pit**	**1911**	**1:10560**
A	**On site**	**Unspecified Pit**	**1909**	**1:10560**
B	104m NW	Cuttings	1982	1:10000
B	109m NW	Cuttings	1911	1:10560
B	109m NW	Cuttings	1909	1:10560
B	110m NW	Cuttings	1911	1:10560
B	118m NW	Cuttings	1956	1:10560
2	217m NE	Pond	1894	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m	0

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	4

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining and ground workings map on **page 90 >**

ID	Location	Name	Commodity	Class	Likelihood
1	**On site**	**Not available**	**Chalk**	**A**	**Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.**
3	231m E	Not available	Chalk	C	Underground mine workings may have occurred in the past, or current mines may be operating to modern engineering standards. Potential for difficult ground conditions should be considered.
4	267m NW	Not available	Chalk	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

ID	Location	Name	Commodity	Class	Likelihood
N	951m SE	Herriard	Chalk	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m	0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m	0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m	0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 Coal mining

Records on site	0

Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.14 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).

19 Ground cavities and sinkholes

Site Outline

Search buffers in metres (m)

- Natural cavities (Area)
- Natural cavities (Point)
- Mining cavities
- Reported recent incidents
- Historical incidents
- BGS karst database (Point)
- BGS karst database (Line)
- BGS karst database (Area)

19.1 Natural cavities

Records within 500m	0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m	1

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

Features are displayed on the Ground cavities and sinkholes map on **page 96 >**

ID	Location	Mine Address	Mineral	Data source	Publisher
1	662m SE	Ellisfield, Hampshire	Chalk	-	BGS

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m	0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m	0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.

This data is sourced from Groundsure.

19.5 National karst database

Records within 500m	0

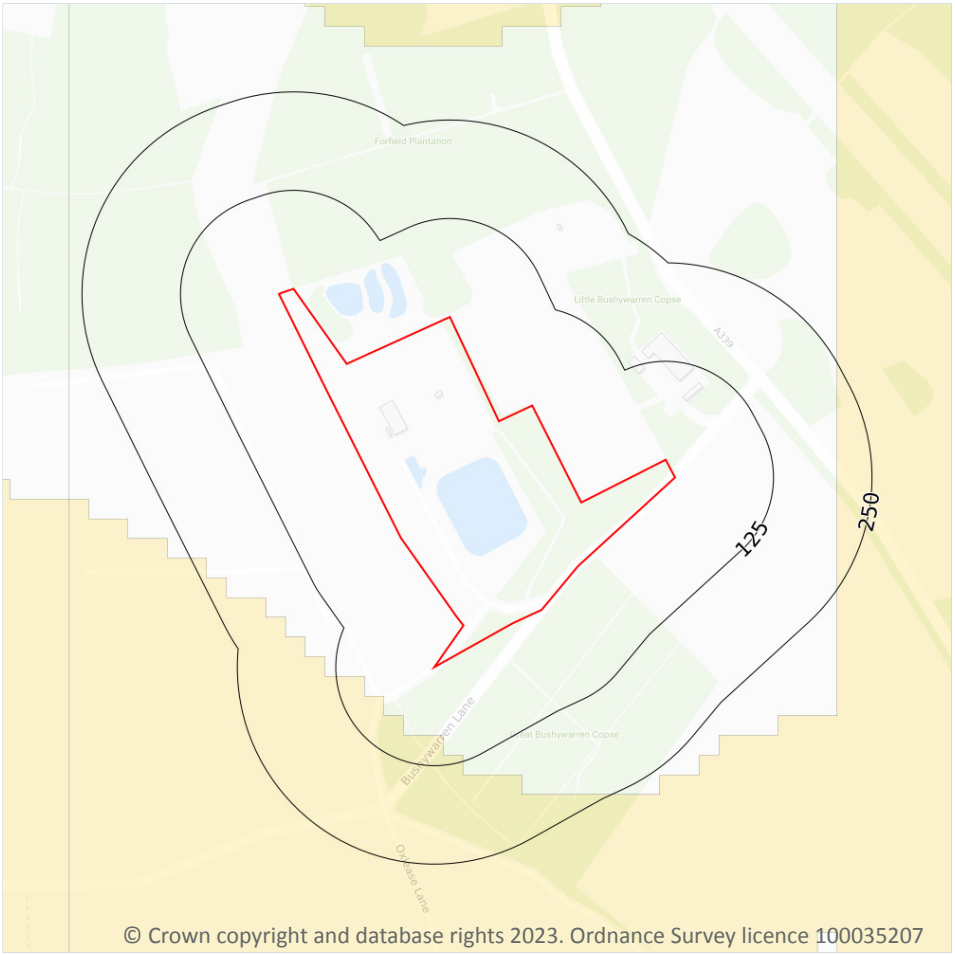
This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

This data is sourced from the British Geological Survey.

20 Radon



Site Outline

Search buffers in metres (m)

Greater than 30%

Between 10% and 30%

Between 5% and 10%

Between 3% and 5%

Between 1% and 3%

Less than 1%

20.1 Radon

Records on site	1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on **page 99 >**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Less than 1%**	**None**

This data is sourced from the British Geological Survey and UK Health Security Agency.

21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m **4**

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km^2. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km^2; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
On site	**15 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m **0**

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km^2).

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m **0**

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km^2.

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects

Site Outline
Search buffers in metres (m)
Crossrail 1 Stations
Crossrail 1 Route
Crossrail 2 Stations
Crossrail 2 Route
Crossrail 2 Worksites
Crossrail 2 Safeguarding
Crossrail 2 Headhouses
Railway stations
Active railways
Active tunnels
Abandoned railways
Historic railways
Historic tunnels
Underground stations
Underground Lines
Royal Mail tunnels
HS2 optimised route
HS2 Stations
HS2 Depots
HS2 Surface Safeguarding
HS2 Subsurface Safeguarding

22.1 Underground railways (London)

Records within 250m	0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m	0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m	0

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m	0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m	1

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

Features are displayed on the Railway infrastructure and projects map on **page 102 >**

Location	Description
47m NW	Abandoned

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m	0

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 1

Records within 500m	0

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

22.9 Crossrail 2

Records within 500m	0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

22.10 HS2

Records within 500m	0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 ltd.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see https://www.groundsure.com/sources-reference ↗.

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: https://www.groundsure.com/terms-and-conditions-april-2023/ ↗.

Appendix B: Site Walkover Photographs (16 August 2023)

Photograph 1: Silage clamp surface (prior to improvement work)

Photograph 2: Silage clamp northern wall

Photograph 3: Waste reception building before improvement work

Photograph 4: Solid food waste hopper and depackaging plant in waste reception building

Photograph 5: Concrete apron to south of waste reception building

Photograph 6: Crop feeder for digester 1 with bunded storage for IBC (redundant)

Photograph 7: Concrete area to east of waste reception building

Photograph 8: Made ground to south of flares and existing CHP

Photograph 9: Crop feeder with northern silage clamp wall and secondary containment liner for existing plant in foreground

Photograph 10: Post digester & digester 1 with control room between. Leak detection pots

Photograph 11: New single pasteuriser tank

Photograph 12: Above ground pipework associated with new pasteuriser and 2 new primary digesters (D2 & D3)

Photograph 13: Above ground pipework associated with Digester 1 and Post Digester

Photograph 14: New raw waste buffer tank with aboveground pipework. Secondary containment to be completed.

Photograph 15: D2 and D3 with supported aboveground pipework

Photograph 16: Area between D2 and Post Digester looking northeast

Photograph 17: View from existing digester area looking southwest

Photograph 18: D2 with new secondary containment bund beyond

Photograph 19: Foam pot on new digester

Photograph 20: Biomethane storage for refuelling

Photograph 21: Refuelling pump (not in use)

Photograph 22: Looking southeast with western side of waste reception building and existing UV treatment system in foreground

Photograph 23: 3 No. new tanks within containment area

Photograph 24: New digestate storage lagoon (south lagoon)

Photograph 25: Possible area for surface water attenuation pond at southern end of site